

September 2016

City of La Grande/2263
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of La Grande/2263

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of La Grande/2263

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of La Grande -- #2263

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of La Grande to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of La Grande.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of La Grande

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.06%	14.81%	20.06%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.02%)	(5.02%)	(5.02%)	(5.02%)	(5.02%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.61%	15.36%	20.61%	8.57%	13.34%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.11%	15.86%	21.11%	9.00%	13.77%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of La Grande

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,347,547	\$3,736,205
Allocated pre-SLGRP pooled liability/(surplus)	(373,160)	(414,085)
Transition liability/(surplus)	(1,082,033)	(1,110,293)
Allocated pooled OPSRP UAL	322,717	264,525
Side account	0	0
Net unfunded pension actuarial accrued liability	3,215,071	2,476,352
Combined valuation payroll	2,270,035	2,313,868
Net pension UAL as a percentage of payroll	142%	107%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.02%)	(4.74%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$11,023	\$18,392
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	606,482	129,605	21.53%	668,610	143,952
Tier 2 Police & Fire	18.95%	711,853	134,896	19.00%	817,913	155,403
Total Police & Fire		1,318,335	264,501		1,486,523	299,355
Total		\$1,318,335	\$264,501		\$1,486,523	\$299,355
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.06%			20.14%
Aggregate (Default)			20.06%			20.14%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,110,293)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.58%)
B. Actual employer payroll	1,098,253
C. Payment to transition liability/(surplus)	(50,300)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.81%)
B. Actual employer payroll	1,111,258
C. Payment to transition liability/(surplus)	(53,451)
4. Supplemental payment to transition liability	0
5. Interest	(75,491)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,082,033)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,082,033)	(1,110,293)
2. Combined valuation payroll	2,270,035	2,313,868
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.02%)	(4.74%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,270,035	2,313,868
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

La Pine Rural Fire Protection District/2579
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
La Pine Rural Fire Protection District/2579

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
La Pine Rural Fire Protection District/2579

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

La Pine Rural Fire Protection District -- #2579

September 2016

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Executive Summary

Milliman has prepared this report for La Pine Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to La Pine Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for La Pine Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.25%	12.26%	19.74%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.60%)	(5.60%)	(5.60%)	(5.60%)	(5.60%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.95%	13.96%	21.44%	9.72%	14.49%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.45%	14.46%	21.94%	10.15%	14.92%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

La Pine Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,501,658	\$2,947,385
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(973,962)	(1,000,338)
Allocated pooled OPSRP UAL	259,927	208,677
Side account	0	0
Net unfunded pension actuarial accrued liability	2,787,623	2,155,724
Combined valuation payroll	1,828,361	1,825,344
Net pension UAL as a percentage of payroll	152%	118%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.60%)	(5.42%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,878	\$14,509
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	59,976	7,353	12.44%	58,383	7,263
Total General Service		59,976	7,353		58,383	7,263
Tier 1 Police & Fire	21.37%	275,778	58,934	21.53%	265,006	57,056
Tier 2 Police & Fire	18.95%	565,935	107,245	19.00%	571,448	108,575
Total Police & Fire		841,713	166,179		836,454	165,631
Total		\$901,689	\$173,532		\$894,837	\$172,894
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.74%			19.80%
Aggregate (Default)			19.25%			19.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,000,338)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.19%)
B. Actual employer payroll	896,928
C. Payment to transition liability/(surplus)	(46,551)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.30%)
B. Actual employer payroll	901,451
C. Payment to transition liability/(surplus)	(47,776)
4. Supplemental payment to transition liability	0
5. Interest	(67,951)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$973,962)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(973,962)	(1,000,338)
2. Combined valuation payroll	1,828,361	1,825,344
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.60%)	(5.42%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,828,361	1,825,344
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lafayette/2233
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lafayette/2233

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lafayette/2233

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lafayette -- #2233

September 2016

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Executive Summary

Milliman has prepared this report for City of Lafayette to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lafayette.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lafayette

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.82%	13.82%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.28%)	(4.28%)	(4.28%)	(4.28%)	(4.28%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.84%	16.84%	22.96%	11.04%	15.81%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.34%	17.34%	23.46%	11.47%	16.24%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lafayette

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$989,188	\$658,565
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(209,871)	(217,889)
Allocated pooled OPSRP UAL	73,427	46,627
Side account	0	0
Net unfunded pension actuarial accrued liability	852,744	487,303
Combined valuation payroll	516,496	407,856
Net pension UAL as a percentage of payroll	165%	119%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.28%)	(5.28%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,508	\$3,242
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$95,829	\$16,818	17.89%	\$92,767	\$16,596
Tier 2 General Service	12.26%	228,753	28,045	12.44%	161,061	20,036
Total General Service		324,582	44,863		253,828	36,632
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$324,582	\$44,863		\$253,828	\$36,632
Employer normal cost rate						
General Service			13.82%			14.43%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.82%			14.43%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$217,889)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.36%)
B. Actual employer payroll	217,049
C. Payment to transition liability/(surplus)	(11,634)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.46%)
B. Actual employer payroll	247,217
C. Payment to transition liability/(surplus)	(11,026)
4. Supplemental payment to transition liability	0
5. Interest	(14,642)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$209,871)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(209,871)	(217,889)
2. Combined valuation payroll	516,496	407,856
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.28%)	(5.28%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	516,496	407,856
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lake County Library District/2768
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lake County Library District/2768

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lake County Library District/2768

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lake County Library District -- #2768

September 2016

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Executive Summary

Milliman has prepared this report for Lake County Library District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lake County Library District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lake County Library District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.83%	16.83%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.75%	0.75%	0.75%	0.75%	0.75%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.15%	23.15%	26.26%	14.34%	19.11%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.65%	23.65%	26.76%	14.77%	19.54%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lake County Library District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$244,344	\$175,663
Allocated pre-SLGRP pooled liability/(surplus)	(20,973)	(19,469)
Transition liability/(surplus)	9,087	9,570
Allocated pooled OPSRP UAL	18,138	12,437
Side account	0	0
Net unfunded pension actuarial accrued liability	250,596	178,201
Combined valuation payroll	127,582	108,790
Net pension UAL as a percentage of payroll	196%	164%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.75%	0.87%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$619	\$865
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$47,311	\$8,303	17.89%	\$28,959	\$5,181
Tier 2 General Service	12.26%	7,431	911	12.44%	0	0
Total General Service		54,742	9,214		28,959	5,181
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$54,742	\$9,214		\$28,959	\$5,181
Employer normal cost rate						
General Service			16.83%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.83%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$9,570
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.97%
B. Actual employer payroll	66,034
C. Payment to transition liability/(surplus)	641
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.73%
B. Actual employer payroll	65,248
C. Payment to transition liability/(surplus)	476
4. Supplemental payment to transition liability	0
5. Interest	634
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$9,087

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	9,087	9,570
2. Combined valuation payroll	127,582	108,790
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.75%	0.87%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	127,582	108,790
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lake County/2000

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lake County/2000

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lake County/2000

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lake County -- #2000

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Lake County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lake County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lake County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.24%	14.97%	19.45%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.41%)	(2.41%)	(2.41%)	(2.41%)	(2.41%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.40%	18.13%	22.61%	11.18%	15.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.90%	18.63%	23.11%	11.61%	16.38%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lake County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,198,445	\$5,560,298
Allocated pre-SLGRP pooled liability/(surplus)	(703,691)	(616,250)
Transition liability/(surplus)	(980,727)	(1,016,759)
Allocated pooled OPSRP UAL	608,568	393,672
Side account	0	0
Net unfunded pension actuarial accrued liability	7,122,595	4,320,961
Combined valuation payroll	4,280,749	3,443,547
Net pension UAL as a percentage of payroll	166%	125%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.41%)	(2.92%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$20,786	\$27,371
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$522,226	\$91,651	17.89%	\$507,994	\$90,880
Tier 2 General Service	12.26%	498,413	61,105	12.44%	563,441	70,092
Total General Service		1,020,639	152,756		1,071,435	160,972
Tier 1 Police & Fire	21.37%	84,044	17,960	21.53%	147,287	31,711
Tier 2 Police & Fire	18.95%	319,776	60,598	19.00%	334,476	63,550
Total Police & Fire		403,820	78,558		481,763	95,261
Total		\$1,424,459	\$231,314		\$1,553,198	\$256,233
Employer normal cost rate						
General Service			14.97%			15.02%
Police & Fire			19.45%			19.77%
Aggregate (Default)			16.24%			16.50%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,016,759)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.48%)
B. Actual employer payroll	1,901,167
C. Payment to transition liability/(surplus)	(47,149)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.75%)
B. Actual employer payroll	2,083,873
C. Payment to transition liability/(surplus)	(57,306)
4. Supplemental payment to transition liability	0
5. Interest	(68,423)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$980,727)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(980,727)	(1,016,759)
2. Combined valuation payroll	4,280,749	3,443,547
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.41%)	(2.92%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,280,749	3,443,547
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lake Oswego/2120
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lake Oswego/2120

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lake Oswego/2120

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lake Oswego -- #2120

September 2016

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Executive Summary

Milliman has prepared this report for City of Lake Oswego to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lake Oswego.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lake Oswego

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.57%	15.10%	20.19%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.06%)	(1.06%)	(1.06%)	(1.06%)	(1.06%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.81%	21.34%	26.43%	14.26%	19.03%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.31%	21.84%	26.93%	14.69%	19.46%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lake Oswego

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$49,091,104	\$40,973,742
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,582,729)	(2,660,533)
Allocated pooled OPSRP UAL	3,644,018	2,900,965
Side account	0	0
Net unfunded pension actuarial accrued liability	50,152,393	41,214,174
Combined valuation payroll	25,632,505	25,375,438
Net pension UAL as a percentage of payroll	196%	162%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.06%)	(1.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$124,463	\$201,699
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$4,123,474	\$723,670	17.89%	\$4,853,370	\$868,268
Tier 2 General Service	12.26%	3,550,732	435,320	12.44%	3,332,408	414,552
Total General Service		7,674,206	1,158,990		8,185,778	1,282,820
Tier 1 Police & Fire	21.37%	3,695,626	789,755	21.53%	3,970,870	854,928
Tier 2 Police & Fire	18.95%	3,510,448	665,230	19.00%	3,515,494	667,944
Total Police & Fire		7,206,074	1,454,985		7,486,364	1,522,872
Total		\$14,880,280	\$2,613,975		\$15,672,142	\$2,805,692
Employer normal cost rate						
General Service			15.10%			15.67%
Police & Fire			20.19%			20.34%
Aggregate (Default)			17.57%			17.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,660,533)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.99%)
B. Actual employer payroll	12,425,573
C. Payment to transition liability/(surplus)	(123,013)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.02%)
B. Actual employer payroll	13,233,389
C. Payment to transition liability/(surplus)	(134,981)
4. Supplemental payment to transition liability	0
5. Interest	(180,190)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,582,729)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,582,729)	(2,660,533)
2. Combined valuation payroll	25,632,505	25,375,438
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.06%)	(1.04%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	25,632,505	25,375,438
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lakeside/2244
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lakeside/2244

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lakeside/2244

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lakeside -- #2244

September 2016

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Executive Summary

Milliman has prepared this report for City of Lakeside to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lakeside.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lakeside

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(8.22%)	(8.22%)	(8.22%)	(8.22%)	(8.22%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.61%	9.61%	17.29%	5.37%	10.14%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	10.11%	10.11%	17.79%	5.80%	10.57%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lakeside

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$719,667	\$641,225
Allocated pre-SLGRP pooled liability/(surplus)	(61,771)	(71,067)
Transition liability/(surplus)	(293,489)	(296,575)
Allocated pooled OPSRP UAL	53,421	45,399
Side account	0	0
Net unfunded pension actuarial accrued liability	417,828	318,982
Combined valuation payroll	375,768	397,117
Net pension UAL as a percentage of payroll	111%	80%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(8.22%)	(7.38%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,825	\$3,157
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	57,157	7,007	12.44%	57,179	7,113
Total General Service		57,157	7,007		57,179	7,113
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$57,157	\$7,007		\$57,179	\$7,113
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$296,575)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.19%)
B. Actual employer payroll	175,511
C. Payment to transition liability/(surplus)	(9,109)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.37%)
B. Actual employer payroll	196,111
C. Payment to transition liability/(surplus)	(14,453)
4. Supplemental payment to transition liability	0
5. Interest	(20,476)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$293,489)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(293,489)	(296,575)
2. Combined valuation payroll	375,768	397,117
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(8.22%)	(7.38%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	375,768	397,117
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lane Community College/2904
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lane Community College/2904

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lane Community College/2904

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lane Community College -- #2904

September 2016

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Executive Summary

Milliman has prepared this report for Lane Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lane Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lane Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(12.30%)	(12.30%)	(12.30%)	(12.30%)	(12.30%)
Net pension contribution rate	11.29%	11.29%	16.70%	4.78%	9.55%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	11.79%	11.79%	17.20%	5.21%	9.98%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lane Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$90,688,908	\$82,535,376
Allocated pre-SLGRP pooled liability/(surplus)	7,924,228	9,222,820
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	6,731,811	5,843,553
Side account	55,371,862	58,882,997
Net unfunded pension actuarial accrued liability	49,973,085	38,718,752
Combined valuation payroll	47,352,447	51,114,963
Net pension UAL as a percentage of payroll	106%	76%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(12.30%)	(11.39%)
Allocated pooled RHIA UAL	\$229,927	\$406,292
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$58,882,997	\$58,882,997
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(4,734,723)	(4,734,723)
5. Side account earnings during 2015		1,224,588	1,224,588
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$55,371,862	\$55,371,862

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$55,371,862	\$58,882,997
Side Account 2	0	0
Side Account 3	0	0
Total	\$55,371,862	\$58,882,997

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$55,371,862	\$58,882,997
2. Combined valuation payroll	47,352,447	51,114,963
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(12.30%)	(11.39%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lane Council of Governments/2522
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lane Council of Governments/2522

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lane Council of Governments/2522

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lane Council of Governments -- #2522

September 2016

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Executive Summary

Milliman has prepared this report for Lane Council of Governments to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lane Council of Governments.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lane Council of Governments

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.30%	15.30%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.64%)	(1.64%)	(1.64%)	(1.64%)	(1.64%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.96%	20.96%	25.60%	13.68%	18.45%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.46%	21.46%	26.10%	14.11%	18.88%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lane Council of Governments

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$19,008,778	\$15,610,665
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,545,380)	(1,607,255)
Allocated pooled OPSRP UAL	1,411,016	1,105,244
Side account	0	0
Net unfunded pension actuarial accrued liability	18,874,414	15,108,654
Combined valuation payroll	9,925,273	9,667,837
Net pension UAL as a percentage of payroll	190%	156%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.64%)	(1.64%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$48,194	\$76,846
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,300,888	\$403,806	17.89%	\$2,647,775	\$473,687
Tier 2 General Service	12.26%	1,708,020	209,403	12.44%	1,715,313	213,385
Total General Service		4,008,908	613,209		4,363,088	687,072
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$4,008,908	\$613,209		\$4,363,088	\$687,072
Employer normal cost rate						
General Service			15.30%			15.75%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.30%			15.75%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,607,255)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.53%)
B. Actual employer payroll	4,825,336
C. Payment to transition liability/(surplus)	(73,828)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.95%)
B. Actual employer payroll	4,916,091
C. Payment to transition liability/(surplus)	(95,864)
4. Supplemental payment to transition liability	0
5. Interest	(107,817)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,545,380)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,545,380)	(1,607,255)
2. Combined valuation payroll	9,925,273	9,667,837
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.64%)	(1.64%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	9,925,273	9,667,837
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lane Fire Authority/2883
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lane Fire Authority/2883

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lane Fire Authority/2883

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lane Fire Authority -- #2883

September 2016

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Executive Summary

Milliman has prepared this report for Lane Fire Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lane Fire Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lane Fire Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.02%	17.55%	20.29%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.37%)	(2.37%)	(2.37%)	(2.37%)	(2.37%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.95%	22.48%	25.22%	12.95%	17.72%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.45%	22.98%	25.72%	13.38%	18.15%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lane Fire Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,727,607	\$3,806,917
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(691,373)	(671,717)
Allocated pooled OPSRP UAL	350,929	269,532
Side account	0	0
Net unfunded pension actuarial accrued liability	4,387,163	3,404,732
Combined valuation payroll	2,468,480	2,357,661
Net pension UAL as a percentage of payroll	178%	144%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.37%)	(2.31%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$11,986	\$18,740
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$117,395	\$20,603	17.89%	\$100,748	\$18,024
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		117,395	20,603		100,748	18,024
Tier 1 Police & Fire	21.37%	596,879	127,553	21.53%	556,024	119,712
Tier 2 Police & Fire	18.95%	477,101	90,411	19.00%	448,717	85,256
Total Police & Fire		1,073,980	217,964		1,004,741	204,968
Total		\$1,191,375	\$238,567		\$1,105,489	\$222,992
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			20.29%			20.40%
Aggregate (Default)			20.02%			20.17%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$671,717)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	1,132,623
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.25%)
B. Actual employer payroll	1,270,211
C. Payment to transition liability/(surplus)	(28,579)
4. Supplemental payment to transition liability	0
5. Interest	(48,235)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$691,373)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(691,373)	(671,717)
2. Combined valuation payroll	2,468,480	2,357,661
3. Regular amortization factor	11.826	12.353
4. Total transition liability/(surplus) rate	(2.37%)	(2.31%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,468,480	2,357,661
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lebanon/2140
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lebanon/2140

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lebanon/2140

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lebanon -- #2140

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Lebanon to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lebanon.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lebanon

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.24%	16.16%	19.46%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.80%)	(5.80%)	(5.80%)	(5.80%)	(5.80%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.74%	17.66%	20.96%	9.52%	14.29%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.24%	18.16%	21.46%	9.95%	14.72%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lebanon

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$10,778,658	\$8,323,777
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,104,143)	(3,182,840)
Allocated pooled OPSRP UAL	800,097	589,328
Side account	0	0
Net unfunded pension actuarial accrued liability	8,474,612	5,730,265
Combined valuation payroll	5,627,985	5,154,996
Net pension UAL as a percentage of payroll	151%	111%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.80%)	(6.10%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$27,328	\$40,975
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,340,277	\$235,219	17.89%	\$1,296,554	\$231,954
Tier 2 General Service	12.26%	478,850	58,707	12.44%	445,637	55,437
Total General Service		1,819,127	293,926		1,742,191	287,391
Tier 1 Police & Fire	21.37%	187,635	40,098	21.53%	177,318	38,177
Tier 2 Police & Fire	18.95%	698,076	132,285	19.00%	654,869	124,425
Total Police & Fire		885,711	172,383		832,187	162,602
Total		\$2,704,838	\$466,309		\$2,574,378	\$449,993
Employer normal cost rate						
General Service			16.16%			16.50%
Police & Fire			19.46%			19.54%
Aggregate (Default)			17.24%			17.48%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,182,840)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.60%)
B. Actual employer payroll	2,524,492
C. Payment to transition liability/(surplus)	(141,372)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.63%)
B. Actual employer payroll	2,733,445
C. Payment to transition liability/(surplus)	(153,893)
4. Supplemental payment to transition liability	0
5. Interest	(216,568)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,104,143)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,104,143)	(3,182,840)
2. Combined valuation payroll	5,627,985	5,154,996
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.80%)	(6.10%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	5,627,985	5,154,996
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lebanon Aquatic District/2849
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lebanon Aquatic District/2849

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lebanon Aquatic District/2849

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lebanon Aquatic District -- #2849

September 2016

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Executive Summary

Milliman has prepared this report for Lebanon Aquatic District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lebanon Aquatic District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lebanon Aquatic District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.67%	14.67%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.59%)	(1.59%)	(1.59%)	(1.59%)	(1.59%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.38%	20.38%	25.65%	13.73%	18.50%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.88%	20.88%	26.15%	14.16%	18.93%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lebanon Aquatic District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$362,649	\$285,072
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(28,556)	(32,957)
Allocated pooled OPSRP UAL	26,919	20,183
Side account	0	0
Net unfunded pension actuarial accrued liability	361,012	272,298
Combined valuation payroll	189,354	176,548
Net pension UAL as a percentage of payroll	191%	154%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.59%)	(1.84%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$919	\$1,403
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$887	\$156	17.89%	\$1,101	\$197
Tier 2 General Service	12.26%	1,062	130	12.44%	894	111
Total General Service		1,949	286		1,995	308
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,949	\$286		\$1,995	\$308
Employer normal cost rate						
General Service			14.67%			15.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.67%			15.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$32,957)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.96%)
B. Actual employer payroll	74,520
C. Payment to transition liability/(surplus)	(4,441)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.14%)
B. Actual employer payroll	91,214
C. Payment to transition liability/(surplus)	(1,952)
4. Supplemental payment to transition liability	0
5. Interest	(1,992)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$28,556)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(28,556)	(32,957)
2. Combined valuation payroll	189,354	176,548
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.59%)	(1.84%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	189,354	176,548
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lebanon Fire District/2705
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lebanon Fire District/2705

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lebanon Fire District/2705

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lebanon Fire District -- #2705

September 2016

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Executive Summary

Milliman has prepared this report for Lebanon Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lebanon Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lebanon Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.83%	17.55%	20.91%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.59%)	(3.59%)	(3.59%)	(3.59%)	(3.59%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.54%	21.26%	24.62%	11.73%	16.50%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.04%	21.76%	25.12%	12.16%	16.93%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lebanon Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,847,485	\$4,607,357
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,042,011)	(1,081,012)
Allocated pooled OPSRP UAL	434,057	326,204
Side account	0	0
Net unfunded pension actuarial accrued liability	5,239,531	3,852,549
Combined valuation payroll	3,053,215	2,853,381
Net pension UAL as a percentage of payroll	172%	135%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.59%)	(3.74%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$14,825	\$22,680
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$46,713	\$8,198	17.89%	\$43,735	\$7,824
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		46,713	8,198		43,735	7,824
Tier 1 Police & Fire	21.37%	1,523,970	325,672	21.53%	1,485,694	319,870
Tier 2 Police & Fire	18.95%	355,140	67,299	19.00%	345,209	65,590
Total Police & Fire		1,879,110	392,971		1,830,903	385,460
Total		\$1,925,823	\$401,169		\$1,874,638	\$393,284
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			20.91%			21.05%
Aggregate (Default)			20.83%			20.98%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,081,012)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.80%)
B. Actual employer payroll	1,411,824
C. Payment to transition liability/(surplus)	(53,649)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.64%)
B. Actual employer payroll	1,594,754
C. Payment to transition liability/(surplus)	(58,050)
4. Supplemental payment to transition liability	0
5. Interest	(72,698)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,042,011)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,042,011)	(1,081,012)
2. Combined valuation payroll	3,053,215	2,853,381
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.59%)	(3.74%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,053,215	2,853,381
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lincoln City/2298
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lincoln City/2298

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lincoln City/2298

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lincoln City -- #2298

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Lincoln City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lincoln City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lincoln City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.51%	14.67%	20.53%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.42%)	(6.42%)	(6.42%)	(6.42%)	(6.42%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.39%	15.55%	21.41%	8.90%	13.67%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.89%	16.05%	21.91%	9.33%	14.10%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lincoln City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$13,340,141	\$11,386,454
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(4,247,599)	(4,355,433)
Allocated pooled OPSRP UAL	990,235	806,168
Side account	0	0
Net unfunded pension actuarial accrued liability	10,082,777	7,837,189
Combined valuation payroll	6,965,442	7,051,742
Net pension UAL as a percentage of payroll	145%	111%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.42%)	(6.10%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$33,822	\$56,051
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$854,037	\$149,883	17.89%	\$1,007,851	\$180,305
Tier 2 General Service	12.26%	1,018,078	124,816	12.44%	1,063,637	132,316
Total General Service		1,872,115	274,699		2,071,488	312,621
Tier 1 Police & Fire	21.37%	560,337	119,744	21.53%	543,628	117,043
Tier 2 Police & Fire	18.95%	298,466	56,559	19.00%	288,587	54,832
Total Police & Fire		858,803	176,303		832,215	171,875
Total		\$2,730,918	\$451,002		\$2,903,703	\$484,496
Employer normal cost rate						
General Service			14.67%			15.09%
Police & Fire			20.53%			20.65%
Aggregate (Default)			16.51%			16.69%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$4,355,433)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.90%)
B. Actual employer payroll	3,349,417
C. Payment to transition liability/(surplus)	(197,616)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.79%)
B. Actual employer payroll	3,567,566
C. Payment to transition liability/(surplus)	(206,562)
4. Supplemental payment to transition liability	0
5. Interest	(296,344)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$4,247,599)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(4,247,599)	(4,355,433)
2. Combined valuation payroll	6,965,442	7,051,742
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.42%)	(6.10%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,965,442	7,051,742
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Lincoln County/2043

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Lincoln County/2043

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Lincoln County/2043

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Lincoln County -- #2043

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Lincoln County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Lincoln County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Lincoln County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.31%	14.81%	20.31%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(9.79%)	(9.79%)	(9.79%)	(9.79%)	(9.79%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.09%	10.59%	16.09%	3.80%	8.57%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.59%	11.09%	16.59%	4.23%	9.00%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Lincoln County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,441,510	\$6,982,726
Allocated pre-SLGRP pooled liability/(surplus)	(724,554)	(773,898)
Transition liability/(surplus)	(4,100,549)	(4,214,898)
Allocated pooled OPSRP UAL	626,611	494,381
Side account	0	0
Net unfunded pension actuarial accrued liability	4,243,018	2,488,311
Combined valuation payroll	4,407,663	4,324,470
Net pension UAL as a percentage of payroll	96%	58%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(9.79%)	(9.63%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$21,402	\$34,373
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	1,116,956	238,693	21.53%	1,354,137	291,546
Tier 2 Police & Fire	18.95%	872,936	165,421	19.00%	940,214	178,641
Total Police & Fire		1,989,892	404,114		2,294,351	470,187
Total		\$1,989,892	\$404,114		\$2,294,351	\$470,187
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.31%			20.49%
Aggregate (Default)			20.31%			20.49%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$4,214,898)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.10%)
B. Actual employer payroll	2,232,327
C. Payment to transition liability/(surplus)	(203,142)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.68%)
B. Actual employer payroll	2,272,951
C. Payment to transition liability/(surplus)	(197,292)
4. Supplemental payment to transition liability	0
5. Interest	(286,085)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$4,100,549)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(4,100,549)	(4,214,898)
2. Combined valuation payroll	4,407,663	4,324,470
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.79%)	(9.63%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,407,663	4,324,470
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Linn-Benton Community College/2910
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Linn-Benton Community College/2910

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Linn-Benton Community College/2910

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Linn-Benton Community College -- #2910

September 2016

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Executive Summary

Milliman has prepared this report for Linn-Benton Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Linn-Benton Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Linn-Benton Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(10.28%)	(10.28%)	(10.28%)	(10.28%)	(10.28%)
Net pension contribution rate	13.31%	13.31%	18.72%	6.80%	11.57%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.81%	13.81%	19.22%	7.23%	12.00%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Linn-Benton Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$48,759,328	\$40,742,902
Allocated pre-SLGRP pooled liability/(surplus)	4,260,499	4,552,768
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	3,619,390	2,884,621
Side account	24,868,567	26,587,264
Net unfunded pension actuarial accrued liability	31,770,650	21,593,027
Combined valuation payroll	25,459,271	25,232,476
Net pension UAL as a percentage of payroll	125%	86%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(10.28%)	(10.41%)
Allocated pooled RHIA UAL	\$123,621	\$200,563
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$26,587,264	\$26,587,264
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(2,271,615)	(2,271,615)
5. Side account earnings during 2015		553,918	553,918
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$24,868,567	\$24,868,567

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$24,868,567	\$26,587,264
Side Account 2	0	0
Side Account 3	0	0
Total	\$24,868,567	\$26,587,264

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$24,868,567	\$26,587,264
2. Combined valuation payroll	25,459,271	25,232,476
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(10.28%)	(10.41%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Linn-Benton Housing Authority/2753
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Linn-Benton Housing Authority/2753

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Linn-Benton Housing Authority/2753

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Linn-Benton Housing Authority -- #2753

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Linn-Benton Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Linn-Benton Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Linn-Benton Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.61%	13.61%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(8.35%)	(8.35%)	(8.35%)	(8.35%)	(8.35%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.56%	12.56%	18.89%	6.97%	11.74%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.06%	13.06%	19.39%	7.40%	12.17%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Linn-Benton Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,272,275	\$1,865,945
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(941,082)	(970,981)
Allocated pooled OPSRP UAL	168,670	132,110
Side account	0	0
Net unfunded pension actuarial accrued liability	1,499,863	1,027,074
Combined valuation payroll	1,186,449	1,155,598
Net pension UAL as a percentage of payroll	126%	89%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(8.35%)	(8.30%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,761	\$9,185
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$188,492	\$33,080	17.89%	\$176,760	\$31,622
Tier 2 General Service	12.26%	549,643	67,386	12.44%	507,357	63,115
Total General Service		738,135	100,466		684,117	94,737
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$738,135	\$100,466		\$684,117	\$94,737
Employer normal cost rate						
General Service			13.61%			13.85%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.61%			13.85%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$970,981)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.48%)
B. Actual employer payroll	541,532
C. Payment to transition liability/(surplus)	(45,922)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.48%)
B. Actual employer payroll	585,317
C. Payment to transition liability/(surplus)	(49,634)
4. Supplemental payment to transition liability	0
5. Interest	(65,657)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$941,082)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(941,082)	(970,981)
2. Combined valuation payroll	1,186,449	1,155,598
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(8.35%)	(8.30%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,186,449	1,155,598
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Local Government Personnel Institute/2572
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Local Government Personnel Institute/2572

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Local Government Personnel Institute/2572

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Local Government Personnel Institute -- #2572

September 2016

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Executive Summary

Milliman has prepared this report for Local Government Personnel Institute to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Local Government Personnel Institute.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Local Government Personnel Institute

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.74%	0.74%	0.74%	0.74%	0.74%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.57%	18.57%	26.25%	14.33%	19.10%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.07%	19.07%	26.75%	14.76%	19.53%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Local Government Personnel Institute

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$556,523	\$284,003
Allocated pre-SLGRP pooled liability/(surplus)	(47,768)	(31,476)
Transition liability/(surplus)	20,554	20,309
Allocated pooled OPSRP UAL	41,311	20,108
Side account	0	0
Net unfunded pension actuarial accrued liability	570,620	292,944
Combined valuation payroll	290,584	175,886
Net pension UAL as a percentage of payroll	196%	167%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.74%	1.14%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,411	\$1,398
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	68,864	8,443	12.44%	61,302	7,626
Total General Service		68,864	8,443		61,302	7,626
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$68,864	\$8,443		\$61,302	\$7,626
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$20,309
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.54%
B. Actual employer payroll	125,667
C. Payment to transition liability/(surplus)	679
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.36%
B. Actual employer payroll	141,839
C. Payment to transition liability/(surplus)	510
4. Supplemental payment to transition liability	0
5. Interest	1,434
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$20,554

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	20,554	20,309
2. Combined valuation payroll	290,584	175,886
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.74%	1.14%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	290,584	175,886
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lowell/2293
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lowell/2293

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lowell/2293

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lowell -- #2293

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Lowell to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lowell.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lowell

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.25%)	(4.25%)	(4.25%)	(4.25%)	(4.25%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.83%	17.86%	22.99%	11.07%	15.84%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.33%	18.36%	23.49%	11.50%	16.27%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lowell

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$368,820	\$108,322
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(77,704)	(77,419)
Allocated pooled OPSRP UAL	27,377	7,669
Side account	0	0
Net unfunded pension actuarial accrued liability	318,493	38,572
Combined valuation payroll	192,576	67,085
Net pension UAL as a percentage of payroll	165%	58%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.25%)	(11.41%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$935	\$533
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$77,419)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.64%)
B. Actual employer payroll	75,957
C. Payment to transition liability/(surplus)	(2,005)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.51%)
B. Actual employer payroll	89,202
C. Payment to transition liability/(surplus)	(3,131)
4. Supplemental payment to transition liability	0
5. Interest	(5,421)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$77,704)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(77,704)	(77,419)
2. Combined valuation payroll	192,576	67,085
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.25%)	(11.41%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	192,576	67,085
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Lyons/2270
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Lyons/2270

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Lyons/2270

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Lyons -- #2270

September 2016

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Executive Summary

Milliman has prepared this report for City of Lyons to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Lyons.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Lyons

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.79%)	(2.79%)	(2.79%)	(2.79%)	(2.79%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.06%	22.06%	24.45%	12.53%	17.30%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.56%	22.56%	24.95%	12.96%	17.73%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Lyons

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$130,840	\$105,314
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(18,095)	(17,795)
Allocated pooled OPSRP UAL	9,712	7,456
Side account	0	0
Net unfunded pension actuarial accrued liability	122,457	94,975
Combined valuation payroll	68,317	65,222
Net pension UAL as a percentage of payroll	179%	146%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.79%)	(2.70%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$332	\$518
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$27,856	\$4,889	17.89%	\$26,326	\$4,710
Tier 2 General Service	12.26%	0	0	12.44%	15,886	1,976
Total General Service		27,856	4,889		42,212	6,686
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$27,856	\$4,889		\$42,212	\$6,686
Employer normal cost rate						
General Service			17.55%			15.84%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			15.84%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$17,795)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.93%)
B. Actual employer payroll	19,879
C. Payment to transition liability/(surplus)	(384)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.76%)
B. Actual employer payroll	32,827
C. Payment to transition liability/(surplus)	(578)
4. Supplemental payment to transition liability	0
5. Interest	(1,262)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$18,095)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(18,095)	(17,795)
2. Combined valuation payroll	68,317	65,222
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.79%)	(2.70%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	68,317	65,222
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Madras/2170
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Madras/2170

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Madras/2170

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Madras -- #2170

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Madras to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Madras.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Madras

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.91%	15.36%	20.34%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.42%)	(3.42%)	(3.42%)	(3.42%)	(3.42%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.79%	19.24%	24.22%	11.90%	16.67%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.29%	19.74%	24.72%	12.33%	17.10%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Madras

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,397,232	\$2,587,569
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(575,750)	(586,450)
Allocated pooled OPSRP UAL	252,176	183,201
Side account	0	0
Net unfunded pension actuarial accrued liability	3,073,658	2,184,320
Combined valuation payroll	1,773,836	1,602,507
Net pension UAL as a percentage of payroll	173%	136%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.42%)	(3.62%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,613	\$12,738
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$200,848	\$35,249	17.89%	\$244,289	\$43,703
Tier 2 General Service	12.26%	141,489	17,347	12.44%	188,605	23,462
Total General Service		342,337	52,596		432,894	67,165
Tier 1 Police & Fire	21.37%	206,213	44,068	21.53%	245,796	52,920
Tier 2 Police & Fire	18.95%	151,967	28,798	19.00%	140,399	26,676
Total Police & Fire		358,180	72,866		386,195	79,596
Total		\$700,517	\$125,462		\$819,089	\$146,761
Employer normal cost rate						
General Service			15.36%			15.52%
Police & Fire			20.34%			20.61%
Aggregate (Default)			17.91%			17.92%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$586,450)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.21%)
B. Actual employer payroll	793,850
C. Payment to transition liability/(surplus)	(25,483)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.98%)
B. Actual employer payroll	851,883
C. Payment to transition liability/(surplus)	(25,386)
4. Supplemental payment to transition liability	0
5. Interest	(40,169)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$575,750)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(575,750)	(586,450)
2. Combined valuation payroll	1,773,836	1,602,507
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.42%)	(3.62%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,773,836	1,602,507
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Malin/2247

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Malin/2247

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Malin/2247

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Malin -- #2247

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Malin to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Malin.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Malin

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.86%	14.86%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(3.56%)	(3.56%)	(3.56%)	(3.56%)	(3.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.87%	16.87%	21.95%	10.03%	14.80%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.37%	17.37%	22.45%	10.46%	15.23%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Malin

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$202,190	\$165,607
Allocated pre-SLGRP pooled liability/(surplus)	(17,354)	(18,354)
Transition liability/(surplus)	(35,676)	(36,737)
Allocated pooled OPSRP UAL	15,009	11,725
Side account	0	0
Net unfunded pension actuarial accrued liability	164,169	122,241
Combined valuation payroll	105,572	102,562
Net pension UAL as a percentage of payroll	156%	119%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(3.56%)	(3.54%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$513	\$815
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$49,160	\$8,628	17.89%	\$48,530	\$8,682
Tier 2 General Service	12.26%	50,912	6,242	12.44%	49,682	6,180
Total General Service		100,072	14,870		98,212	14,862
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$100,072	\$14,870		\$98,212	\$14,862
Employer normal cost rate						
General Service			14.86%			15.13%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.86%			15.13%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$36,737)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.60%)
B. Actual employer payroll	49,545
C. Payment to transition liability/(surplus)	(1,784)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.40%)
B. Actual employer payroll	51,945
C. Payment to transition liability/(surplus)	(1,766)
4. Supplemental payment to transition liability	0
5. Interest	(2,489)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$35,676)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(35,676)	(36,737)
2. Combined valuation payroll	105,572	102,562
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.56%)	(3.54%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	105,572	102,562
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Manzanita/2281
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Manzanita/2281

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Manzanita/2281

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Manzanita -- #2281

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Manzanita to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Manzanita.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Manzanita

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.34%	17.55%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.01%)	(1.01%)	(1.01%)	(1.01%)	(1.01%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.90%	22.11%	23.51%	12.58%	17.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.40%	22.61%	24.01%	13.01%	17.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Manzanita

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,230,023	\$1,065,837
Allocated pre-SLGRP pooled liability/(surplus)	(105,576)	(118,127)
Transition liability/(surplus)	(61,609)	(63,526)
Allocated pooled OPSRP UAL	91,304	75,462
Side account	0	0
Net unfunded pension actuarial accrued liability	1,154,142	959,646
Combined valuation payroll	642,246	660,083
Net pension UAL as a percentage of payroll	180%	145%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.01%)	(0.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,119	\$5,247
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$104,958	\$18,420	17.89%	\$150,586	\$26,940
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		104,958	18,420		150,586	26,940
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	137,826	26,118	19.00%	138,885	26,388
Total Police & Fire		137,826	26,118		138,885	26,388
Total		\$242,784	\$44,538		\$289,471	\$53,328
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.34%			18.42%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$63,526)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.05%)
B. Actual employer payroll	306,607
C. Payment to transition liability/(surplus)	(3,219)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.03%)
B. Actual employer payroll	290,896
C. Payment to transition liability/(surplus)	(2,996)
4. Supplemental payment to transition liability	0
5. Interest	(4,298)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$61,609)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(61,609)	(63,526)
2. Combined valuation payroll	642,246	660,083
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.01%)	(0.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	642,246	660,083
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Marion County Fire District #1/2580
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Marion County Fire District #1/2580

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Marion County Fire District #1/2580

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Marion County Fire District #1 -- #2580

September 2016

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Executive Summary

Milliman has prepared this report for Marion County Fire District #1 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Marion County Fire District #1.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Marion County Fire District #1

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.50%	14.53%	19.81%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	1.66%	1.66%	1.66%	1.66%	1.66%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	28.46%	23.49%	28.77%	16.98%	21.75%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	28.96%	23.99%	29.27%	17.41%	22.18%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Marion County Fire District #1

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,746,612	\$5,789,268
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	639,396	661,149
Allocated pooled OPSRP UAL	575,029	409,884
Side account	0	0
Net unfunded pension actuarial accrued liability	8,961,037	6,860,301
Combined valuation payroll	4,044,828	3,585,350
Net pension UAL as a percentage of payroll	222%	191%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	1.66%	1.82%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$19,640	\$28,498
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$62,210	\$10,918	17.89%	\$61,322	\$10,971
Tier 2 General Service	12.26%	82,540	10,119	12.44%	116,624	14,508
Total General Service		144,750	21,037		177,946	25,479
Tier 1 Police & Fire	21.37%	832,590	177,924	21.53%	795,932	171,364
Tier 2 Police & Fire	18.95%	1,521,867	288,394	19.00%	1,434,647	272,583
Total Police & Fire		2,354,457	466,318		2,230,579	443,947
Total		\$2,499,207	\$487,355		\$2,408,525	\$469,426
Employer normal cost rate						
General Service			14.53%			14.32%
Police & Fire			19.81%			19.90%
Aggregate (Default)			19.50%			19.49%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$661,149
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.66%
B. Actual employer payroll	1,849,606
C. Payment to transition liability/(surplus)	30,703
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.74%
B. Actual employer payroll	2,049,351
C. Payment to transition liability/(surplus)	35,659
4. Supplemental payment to transition liability	0
5. Interest	44,609
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$639,396

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	639,396	661,149
2. Combined valuation payroll	4,044,828	3,585,350
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.66%	1.82%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,044,828	3,585,350
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Marion County Housing Authority/2598
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Marion County Housing Authority/2598

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Marion County Housing Authority/2598

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Marion County Housing Authority -- #2598

September 2016

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Executive Summary

Milliman has prepared this report for Marion County Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Marion County Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Marion County Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.08%	13.08%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(27.87%)	(27.87%)	(27.87%)	(27.87%)	(27.87%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	0.00%	0.00%	0.00%	0.00%	0.00%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	0.50%	0.50%	0.50%	0.43%	0.43%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Marion County Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,240,807	\$1,121,369
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,716,288)	(1,690,624)
Allocated pooled OPSRP UAL	92,105	79,394
Side account	0	0
Net unfunded pension actuarial accrued liability	(383,376)	(489,861)
Combined valuation payroll	647,877	694,475
Net pension UAL as a percentage of payroll	(59%)	(71%)
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(27.87%)	(24.06%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,146	\$5,520
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$25,419	\$4,461	17.89%	\$23,668	\$4,234
Tier 2 General Service	12.26%	137,734	16,886	12.44%	207,644	25,831
Total General Service		163,153	21,347		231,312	30,065
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$163,153	\$21,347		\$231,312	\$30,065
Employer normal cost rate						
General Service			13.08%			13.00%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.08%			13.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,690,624)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(14.54%)
B. Actual employer payroll	363,804
C. Payment to transition liability/(surplus)	(47,682)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(16.80%)
B. Actual employer payroll	338,876
C. Payment to transition liability/(surplus)	(46,395)
4. Supplemental payment to transition liability	0
5. Interest	(119,741)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,716,288)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,716,288)	(1,690,624)
2. Combined valuation payroll	647,877	694,475
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(27.87%)	(24.06%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	647,877	694,475
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Marion County/2009
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Marion County/2009

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Marion County/2009

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Marion County -- #2009

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Marion County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Marion County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Marion County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.28%	14.83%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.62%)	(4.62%)	(4.62%)	(4.62%)	(4.62%)
Side account rate relief ²	(2.37%)	(2.37%)	(2.37%)	(2.37%)	(2.37%)
Net pension contribution rate	16.59%	15.14%	20.25%	8.33%	13.10%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.09%	15.64%	20.75%	8.76%	13.53%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Marion County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$153,066,066	\$123,063,429
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(35,087,566)	(36,169,368)
Allocated pooled OPSRP UAL	11,362,048	8,712,963
Side account	18,034,492	19,366,035
Net unfunded pension actuarial accrued liability	111,306,056	76,240,989
Combined valuation payroll	79,922,153	76,214,381
Net pension UAL as a percentage of payroll	139%	100%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.62%)	(4.69%)
Side account rate relief	(2.37%)	(2.51%)
Allocated pooled RHIA UAL	\$388,075	\$605,797
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$13,479,852	\$2,365,714	17.89%	\$14,102,129	\$2,522,871
Tier 2 General Service	12.26%	14,287,615	1,751,662	12.44%	14,360,823	1,786,486
Total General Service		27,767,467	4,117,376		28,462,952	4,309,357
Tier 1 Police & Fire	21.37%	4,517,775	965,449	21.53%	4,983,469	1,072,941
Tier 2 Police & Fire	18.95%	6,503,836	1,232,477	19.00%	6,937,592	1,318,142
Total Police & Fire		11,021,611	2,197,926		11,921,061	2,391,083
Total		\$38,789,078	\$6,315,302		\$40,384,013	\$6,700,440
Employer normal cost rate						
General Service			14.83%			15.14%
Police & Fire			19.94%			20.06%
Aggregate (Default)			16.28%			16.59%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$36,169,368)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.35%)
B. Actual employer payroll	37,826,179
C. Payment to transition liability/(surplus)	(1,645,439)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.67%)
B. Actual employer payroll	40,349,755
C. Payment to transition liability/(surplus)	(1,884,333)
4. Supplemental payment to transition liability	0
5. Interest	(2,447,970)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$35,087,566)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(35,087,566)	(36,169,368)
2. Combined valuation payroll	79,922,153	76,214,381
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.62%)	(4.69%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$19,366,035	\$19,366,035
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,733,298)	(1,733,298)
5. Side account earnings during 2015		402,755	402,755
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$18,034,492	\$18,034,492

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$18,034,492	\$19,366,035
Side Account 2	0	0
Side Account 3	0	0
Total	\$18,034,492	\$19,366,035

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$18,034,492	\$19,366,035
2. Combined valuation payroll	79,922,153	76,214,381
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(2.37%)	(2.51%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

McKenzie Fire And Rescue/2628
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
McKenzie Fire And Rescue/2628

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
McKenzie Fire And Rescue/2628

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

McKenzie Fire And Rescue -- #2628

September 2016

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Executive Summary

Milliman has prepared this report for McKenzie Fire And Rescue to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to McKenzie Fire And Rescue.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for McKenzie Fire And Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(6.23%)	(6.23%)	(6.23%)	(6.23%)	(6.23%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.29%	14.15%	18.29%	7.36%	12.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.79%	14.65%	18.79%	7.79%	12.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

McKenzie Fire And Rescue

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$710,936	\$513,265
Allocated pre-SLGRP pooled liability/(surplus)	(61,021)	(56,885)
Transition liability/(surplus)	(219,929)	(227,344)
Allocated pooled OPSRP UAL	52,773	36,339
Side account	0	0
Net unfunded pension actuarial accrued liability	482,759	265,375
Combined valuation payroll	371,209	317,870
Net pension UAL as a percentage of payroll	130%	83%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.23%)	(7.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,802	\$2,527
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	125,461	23,775	19.00%	101,883	19,358
Total Police & Fire		125,461	23,775		101,883	19,358
Total		\$125,461	\$23,775		\$101,883	\$19,358
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$227,344)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.53%)
B. Actual employer payroll	153,928
C. Payment to transition liability/(surplus)	(10,051)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.43%)
B. Actual employer payroll	197,623
C. Payment to transition liability/(surplus)	(12,708)
4. Supplemental payment to transition liability	0
5. Interest	(15,344)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$219,929)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(219,929)	(227,344)
2. Combined valuation payroll	371,209	317,870
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.23%)	(7.07%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	371,209	317,870
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of McMinnville/2117
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of McMinnville/2117

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of McMinnville/2117

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of McMinnville -- #2117

September 2016

Secondary Employers

2135 McMinnville Water & Light Department

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Executive Summary

Milliman has prepared this report for City of McMinnville to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of McMinnville.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of McMinnville

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.92%	14.99%	19.88%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	2.99%	2.99%	2.99%	2.99%	2.99%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.48%	23.55%	28.44%	16.58%	21.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.98%	24.05%	28.94%	17.01%	21.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of McMinnville

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$33,421,156	\$27,061,168
Allocated pre-SLGRP pooled liability/(surplus)	(2,868,614)	(2,999,199)
Transition liability/(surplus)	4,959,923	5,116,056
Allocated pooled OPSRP UAL	2,480,842	1,915,947
Side account	0	0
Net unfunded pension actuarial accrued liability	37,993,307	31,093,972
Combined valuation payroll	17,450,574	16,759,245
Net pension UAL as a percentage of payroll	218%	186%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	2.99%	3.02%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$84,734	\$133,212
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,635,598	\$462,547	17.89%	\$2,764,710	\$494,607
Tier 2 General Service	12.26%	2,464,784	302,183	12.44%	2,463,936	306,514
Total General Service		5,100,382	764,730		5,228,646	801,121
Tier 1 Police & Fire	21.37%	1,272,574	271,949	21.53%	1,409,179	303,396
Tier 2 Police & Fire	18.95%	2,038,054	386,211	19.00%	2,053,060	390,081
Total Police & Fire		3,310,628	658,160		3,462,239	693,477
Total		\$8,411,010	\$1,422,890		\$8,690,885	\$1,494,598
Employer normal cost rate						
General Service			14.99%			15.32%
Police & Fire			19.88%			20.03%
Aggregate (Default)			16.92%			17.20%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$5,116,056
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.92%
B. Actual employer payroll	8,275,274
C. Payment to transition liability/(surplus)	241,638
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.94%
B. Actual employer payroll	8,861,753
C. Payment to transition liability/(surplus)	260,536
4. Supplemental payment to transition liability	0
5. Interest	346,041
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$4,959,923

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	4,959,923	5,116,056
2. Combined valuation payroll	17,450,574	16,759,245
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.99%	3.02%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	17,450,574	16,759,245
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Medford/2102
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Medford/2102

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Medford/2102

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Medford -- #2102

September 2016

Secondary Employers

2134 Medford Water Commission

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Executive Summary

Milliman has prepared this report for City of Medford to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Medford.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Medford

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.50%	14.72%	20.07%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(6.81%)	(6.81%)	(6.81%)	(6.81%)	(6.81%)
Net pension contribution rate	17.99%	15.21%	20.56%	8.51%	13.28%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.49%	15.71%	21.06%	8.94%	13.71%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Medford

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$71,335,051	\$58,648,570
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	5,295,180	4,152,353
Side account	24,099,918	25,946,203
Net unfunded pension actuarial accrued liability	52,530,313	36,854,720
Combined valuation payroll	37,246,994	36,321,631
Net pension UAL as a percentage of payroll	141%	101%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	(6.81%)	(7.06%)
Allocated pooled RHIA UAL	\$180,859	\$288,706
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$4,643,346	\$814,907	17.89%	\$5,117,645	\$915,547
Tier 2 General Service	12.26%	5,350,568	655,980	12.44%	5,517,834	686,419
Total General Service		9,993,914	1,470,887		10,635,479	1,601,966
Tier 1 Police & Fire	21.37%	5,018,002	1,072,347	21.53%	5,315,142	1,144,350
Tier 2 Police & Fire	18.95%	5,839,771	1,106,637	19.00%	5,599,806	1,063,963
Total Police & Fire		10,857,773	2,178,984		10,914,948	2,208,313
Total		\$20,851,687	\$3,649,871		\$21,550,427	\$3,810,279
Employer normal cost rate						
General Service			14.72%			15.06%
Police & Fire			20.07%			20.23%
Aggregate (Default)			17.50%			17.68%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	37,246,994	36,321,631
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$25,946,203	\$25,946,203
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(2,384,528)	(2,384,528)
5. Side account earnings during 2015		539,244	539,244
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$24,099,918	\$24,099,918

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$24,099,918	\$25,946,203
Side Account 2	0	0
Side Account 3	0	0
Total	\$24,099,918	\$25,946,203

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$24,099,918	\$25,946,203
2. Combined valuation payroll	37,246,994	36,321,631
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(6.81%)	(7.06%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Medford Irrigation District/2592
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Medford Irrigation District/2592

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Medford Irrigation District/2592

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Medford Irrigation District -- #2592

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Medford Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Medford Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Medford Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.57%	16.57%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.08%)	(3.08%)	(3.08%)	(3.08%)	(3.08%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.79%	20.79%	24.16%	12.24%	17.01%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.29%	21.29%	24.66%	12.67%	17.44%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Medford Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$842,777	\$602,262
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(128,918)	(132,403)
Allocated pooled OPSRP UAL	62,559	42,641
Side account	0	0
Net unfunded pension actuarial accrued liability	776,418	512,500
Combined valuation payroll	440,049	372,987
Net pension UAL as a percentage of payroll	176%	137%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.08%)	(3.51%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,137	\$2,965
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$156,600	\$27,483	17.89%	\$152,867	\$27,348
Tier 2 General Service	12.26%	35,822	4,392	12.44%	0	0
Total General Service		192,422	31,875		152,867	27,348
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,422	\$31,875		\$152,867	\$27,348
Employer normal cost rate						
General Service			16.57%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.57%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$132,403)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.73%)
B. Actual employer payroll	201,040
C. Payment to transition liability/(surplus)	(5,488)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.19%)
B. Actual employer payroll	219,157
C. Payment to transition liability/(surplus)	(6,991)
4. Supplemental payment to transition liability	0
5. Interest	(8,994)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$128,918)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(128,918)	(132,403)
2. Combined valuation payroll	440,049	372,987
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.08%)	(3.51%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	440,049	372,987
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Metro/2594

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Metro/2594

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Metro/2594

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Metro -- #2594

September 2016

Secondary Employers

2171	Portland Zoological Society
2807	Friends of the Zoo

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Executive Summary

Milliman has prepared this report for Metro to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Metro.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Metro

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.54%	14.54%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.08%)	(1.08%)	(1.08%)	(1.08%)	(1.08%)
Side account rate relief ²	(3.23%)	(3.23%)	(3.23%)	(3.23%)	(3.23%)
Net pension contribution rate	15.80%	15.80%	21.20%	9.28%	14.05%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.30%	16.30%	21.70%	9.71%	14.48%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Metro

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$115,928,646	\$88,113,844
Allocated pre-SLGRP pooled liability/(surplus)	(9,950,420)	(9,765,688)
Transition liability/(surplus)	(6,228,221)	(6,462,370)
Allocated pooled OPSRP UAL	8,605,349	6,238,512
Side account	18,565,514	20,043,703
Net unfunded pension actuarial accrued liability	89,789,840	58,080,595
Combined valuation payroll	60,531,163	54,569,762
Net pension UAL as a percentage of payroll	148%	106%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.08%)	(1.17%)
Side account rate relief	(3.23%)	(3.63%)
Allocated pooled RHIA UAL	\$293,919	\$433,753
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$11,723,112	\$2,057,406	17.89%	\$12,121,373	\$2,168,514
Tier 2 General Service	12.26%	15,507,318	1,901,197	12.44%	15,085,576	1,876,646
Total General Service		27,230,430	3,958,603		27,206,949	4,045,160
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$27,230,430	\$3,958,603		\$27,206,949	\$4,045,160
Employer normal cost rate						
General Service			14.54%			14.87%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.54%			14.87%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$6,462,370)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.12%)
B. Actual employer payroll	28,154,701
C. Payment to transition liability/(surplus)	(315,333)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.18%)
B. Actual employer payroll	29,944,372
C. Payment to transition liability/(surplus)	(353,343)
4. Supplemental payment to transition liability	0
5. Interest	(434,527)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$6,228,221)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(6,228,221)	(6,462,370)
2. Combined valuation payroll	60,531,163	54,569,762
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.08%)	(1.17%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$20,043,703	\$20,043,703
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,894,122)	(1,894,122)
5. Side account earnings during 2015		416,934	416,934
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$18,565,514	\$18,565,514

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$18,565,514	\$20,043,703
Side Account 2	0	0
Side Account 3	0	0
Total	\$18,565,514	\$20,043,703

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$18,565,514	\$20,043,703
2. Combined valuation payroll	60,531,163	54,569,762
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(3.23%)	(3.63%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Metropolitan Area Communications Commission/2663
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Metropolitan Area Communications Commission/2663

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Metropolitan Area Communications Commission/2663

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Metropolitan Area Communications Commission -- #2663

September 2016

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Executive Summary

Milliman has prepared this report for Metropolitan Area Communications Commission to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Metropolitan Area Communications Commission.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Metropolitan Area Communications Commission

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.27%)	(1.27%)	(1.27%)	(1.27%)	(1.27%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.85%	21.85%	24.24%	12.32%	17.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.35%	22.35%	24.74%	12.75%	17.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Metropolitan Area Communications Commission

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,617,477	\$1,602,403
Allocated pre-SLGRP pooled liability/(surplus)	(138,832)	(177,595)
Transition liability/(surplus)	(101,881)	(116,253)
Allocated pooled OPSRP UAL	120,065	113,451
Side account	0	0
Net unfunded pension actuarial accrued liability	1,496,829	1,422,006
Combined valuation payroll	844,552	992,384
Net pension UAL as a percentage of payroll	177%	143%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.27%)	(1.16%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,101	\$7,888
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$296,590	\$52,052	17.89%	\$415,991	\$74,421
Tier 2 General Service	12.26%	0	0	12.44%	79,669	9,911
Total General Service		296,590	52,052		495,660	84,332
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$296,590	\$52,052		\$495,660	\$84,332
Employer normal cost rate						
General Service			17.55%			17.01%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$116,253)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.19%)
B. Actual employer payroll	491,062
C. Payment to transition liability/(surplus)	(15,665)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.35%)
B. Actual employer payroll	430,759
C. Payment to transition liability/(surplus)	(5,815)
4. Supplemental payment to transition liability	0
5. Interest	(7,108)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$101,881)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(101,881)	(116,253)
2. Combined valuation payroll	844,552	992,384
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.27%)	(1.16%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	844,552	992,384
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mid-Columbia Center For Living/2811
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mid-Columbia Center For Living/2811

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mid-Columbia Center For Living/2811

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mid-Columbia Center For Living -- #2811

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Mid-Columbia Center For Living to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mid-Columbia Center For Living.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mid-Columbia Center For Living

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.95%	13.95%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.18%	0.18%	0.18%	0.18%	0.18%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.70%	19.70%	25.69%	13.77%	18.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.20%	20.20%	26.19%	14.20%	18.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mid-Columbia Center For Living

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$11,075,303	\$7,881,957
Allocated pre-SLGRP pooled liability/(surplus)	(950,619)	(873,560)
Transition liability/(surplus)	97,305	103,538
Allocated pooled OPSRP UAL	822,116	558,047
Side account	0	0
Net unfunded pension actuarial accrued liability	11,044,105	7,669,982
Combined valuation payroll	5,782,876	4,881,373
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.18%	0.21%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$28,080	\$38,800
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$439,223	\$77,084	17.89%	\$502,127	\$89,831
Tier 2 General Service	12.26%	937,770	114,971	12.44%	982,275	122,195
Total General Service		1,376,993	192,055		1,484,402	212,026
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,376,993	\$192,055		\$1,484,402	\$212,026
Employer normal cost rate						
General Service			13.95%			14.28%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.95%			14.28%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$103,538
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.24%
B. Actual employer payroll	2,531,733
C. Payment to transition liability/(surplus)	6,076
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.26%
B. Actual employer payroll	2,671,460
C. Payment to transition liability/(surplus)	6,946
4. Supplemental payment to transition liability	0
5. Interest	6,789
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$97,305

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	97,305	103,538
2. Combined valuation payroll	5,782,876	4,881,373
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.18%	0.21%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	5,782,876	4,881,373
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mid-Willamette Valley Senior Service Agency/2657
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mid-Willamette Valley Senior Service Agency/2657

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mid-Willamette Valley Senior Service Agency/2657

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mid-Willamette Valley Senior Service Agency -- #2657

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Mid-Willamette Valley Senior Service Agency to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mid-Willamette Valley Senior Service Agency.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mid-Willamette Valley Senior Service Agency

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.32%	14.32%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.24%)	(4.24%)	(4.24%)	(4.24%)	(4.24%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.38%	17.38%	23.00%	11.08%	15.85%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.88%	17.88%	23.50%	11.51%	16.28%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mid-Willamette Valley Senior Service Agency

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$21,028,160	\$15,669,293
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(4,424,489)	(4,673,366)
Allocated pooled OPSRP UAL	1,560,914	1,109,395
Side account	0	0
Net unfunded pension actuarial accrued liability	18,164,585	12,105,322
Combined valuation payroll	10,979,676	9,704,146
Net pension UAL as a percentage of payroll	165%	125%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.24%)	(4.76%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$53,314	\$77,134
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,487,991	\$261,142	17.89%	\$1,660,291	\$297,026
Tier 2 General Service	12.26%	2,328,952	285,530	12.44%	2,339,047	290,977
Total General Service		3,816,943	546,672		3,999,338	588,003
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$3,816,943	\$546,672		\$3,999,338	\$588,003
Employer normal cost rate						
General Service			14.32%			14.70%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.32%			14.70%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$4,673,366)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.97%)
B. Actual employer payroll	5,185,393
C. Payment to transition liability/(surplus)	(257,714)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.70%)
B. Actual employer payroll	5,260,488
C. Payment to transition liability/(surplus)	(299,848)
4. Supplemental payment to transition liability	0
5. Interest	(308,685)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$4,424,489)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(4,424,489)	(4,673,366)
2. Combined valuation payroll	10,979,676	9,704,146
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.24%)	(4.76%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	10,979,676	9,704,146
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Mill City/2207

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Mill City/2207

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Mill City/2207

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Mill City -- #2207

September 2016

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Executive Summary

Milliman has prepared this report for City of Mill City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Mill City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Mill City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.18%	0.18%	0.18%	0.18%	0.18%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.01%	18.01%	25.69%	13.77%	18.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.51%	18.51%	26.19%	14.20%	18.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Mill City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$455,298	\$395,245
Allocated pre-SLGRP pooled liability/(surplus)	(39,079)	(43,805)
Transition liability/(surplus)	4,031	4,102
Allocated pooled OPSRP UAL	33,797	27,984
Side account	0	0
Net unfunded pension actuarial accrued liability	454,047	383,526
Combined valuation payroll	237,730	244,779
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.18%	0.17%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,154	\$1,946
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$67,295	\$12,039
Tier 2 General Service	12.26%	58,527	7,175	12.44%	57,668	7,174
Total General Service		58,527	7,175		124,963	19,213
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$58,527	\$7,175		\$124,963	\$19,213
Employer normal cost rate						
General Service			12.26%			15.37%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			15.37%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$4,102
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.17%
B. Actual employer payroll	108,120
C. Payment to transition liability/(surplus)	184
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.17%
B. Actual employer payroll	98,510
C. Payment to transition liability/(surplus)	168
4. Supplemental payment to transition liability	0
5. Interest	281
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$4,031

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	4,031	4,102
2. Combined valuation payroll	237,730	244,779
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.18%	0.17%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	237,730	244,779
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mill City Rural Fire Protection District/2853
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mill City Rural Fire Protection District/2853

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mill City Rural Fire Protection District/2853

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mill City Rural Fire Protection District -- #2853

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Mill City Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mill City Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mill City Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.62%)	(10.62%)	(10.62%)	(10.62%)	(10.62%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.63%	11.49%	15.63%	4.70%	9.47%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.13%	11.99%	16.13%	5.13%	9.90%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mill City Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$101,698	\$86,272
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(53,606)	(54,971)
Allocated pooled OPSRP UAL	7,549	6,108
Side account	0	0
Net unfunded pension actuarial accrued liability	55,641	37,409
Combined valuation payroll	53,101	53,429
Net pension UAL as a percentage of payroll	105%	70%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.62%)	(10.17%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$258	\$425
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	53,101	10,063	19.00%	53,429	10,152
Total Police & Fire		53,101	10,063		53,429	10,152
Total		\$53,101	\$10,063		\$53,429	\$10,152
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$54,971)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.05%)
B. Actual employer payroll	24,190
C. Payment to transition liability/(surplus)	(2,431)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(10.05%)
B. Actual employer payroll	26,609
C. Payment to transition liability/(surplus)	(2,674)
4. Supplemental payment to transition liability	0
5. Interest	(3,740)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$53,606)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(53,606)	(54,971)
2. Combined valuation payroll	53,101	53,429
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.62%)	(10.17%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	53,101	53,429
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Millersburg/2286
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Millersburg/2286

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Millersburg/2286

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Millersburg -- #2286

September 2016

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Executive Summary

Milliman has prepared this report for City of Millersburg to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Millersburg.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Millersburg

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.24%	15.24%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.56%)	(1.56%)	(1.56%)	(1.56%)	(1.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.98%	20.98%	25.68%	13.76%	18.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.48%	21.48%	26.18%	14.19%	18.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Millersburg

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$429,131	\$350,487
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(33,208)	(34,010)
Allocated pooled OPSRP UAL	31,854	24,815
Side account	0	0
Net unfunded pension actuarial accrued liability	427,777	341,292
Combined valuation payroll	224,067	217,060
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.56%)	(1.55%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,088	\$1,725
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$73,784	\$12,949	17.89%	\$71,962	\$12,874
Tier 2 General Service	12.26%	57,273	7,022	12.44%	59,167	7,360
Total General Service		131,057	19,971		131,129	20,234
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$131,057	\$19,971		\$131,129	\$20,234
Employer normal cost rate						
General Service			15.24%			15.43%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.24%			15.43%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$34,010)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.78%)
B. Actual employer payroll	84,933
C. Payment to transition liability/(surplus)	(1,512)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.53%)
B. Actual employer payroll	105,098
C. Payment to transition liability/(surplus)	(1,607)
4. Supplemental payment to transition liability	0
5. Interest	(2,317)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$33,208)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(33,208)	(34,010)
2. Combined valuation payroll	224,067	217,060
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.56%)	(1.55%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	224,067	217,060
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Milton-Freewater/2158
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Milton-Freewater/2158

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Milton-Freewater/2158

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Milton-Freewater -- #2158

September 2016

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Executive Summary

Milliman has prepared this report for City of Milton-Freewater to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Milton-Freewater.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Milton-Freewater

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.20%	15.58%	19.77%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.56%	1.56%	1.56%	1.56%	1.56%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.33%	22.71%	26.90%	15.15%	19.92%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.83%	23.21%	27.40%	15.58%	20.35%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Milton-Freewater

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,044,501	\$6,382,236
Allocated pre-SLGRP pooled liability/(surplus)	(690,478)	(707,345)
Transition liability/(surplus)	624,003	642,443
Allocated pooled OPSRP UAL	597,141	451,866
Side account	0	0
Net unfunded pension actuarial accrued liability	8,575,167	6,769,200
Combined valuation payroll	4,200,368	3,952,581
Net pension UAL as a percentage of payroll	204%	171%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.56%	1.61%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$20,396	\$31,417
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,199,078	\$210,438	17.89%	\$1,156,365	\$206,874
Tier 2 General Service	12.26%	713,455	87,470	12.44%	741,211	92,207
Total General Service		1,912,533	297,908		1,897,576	299,081
Tier 1 Police & Fire	21.37%	112,050	23,945	21.53%	109,044	23,477
Tier 2 Police & Fire	18.95%	219,907	41,672	19.00%	192,072	36,494
Total Police & Fire		331,957	65,617		301,116	59,971
Total		\$2,244,490	\$363,525		\$2,198,692	\$359,052
Employer normal cost rate						
General Service			15.58%			15.76%
Police & Fire			19.77%			19.92%
Aggregate (Default)			16.20%			16.33%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$642,443
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.53%
B. Actual employer payroll	1,949,361
C. Payment to transition liability/(surplus)	29,825
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.60%
B. Actual employer payroll	2,009,356
C. Payment to transition liability/(surplus)	32,150
4. Supplemental payment to transition liability	0
5. Interest	43,535
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$624,003

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	624,003	642,443
2. Combined valuation payroll	4,200,368	3,952,581
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.56%	1.61%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,200,368	3,952,581
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Milwaukie/2163
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Milwaukee/2163

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Milwaukie/2163

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Milwaukie -- #2163

September 2016

Secondary Employers

2560 Wichita Water District

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Executive Summary

Milliman has prepared this report for City of Milwaukie to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Milwaukie.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Milwaukie

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.37%	14.66%	20.28%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.80%)	(0.80%)	(0.80%)	(0.80%)	(0.80%)
Side account rate relief ²	(3.50%)	(3.50%)	(3.50%)	(3.50%)	(3.50%)
Net pension contribution rate	18.64%	15.93%	21.55%	9.29%	14.06%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.14%	16.43%	22.05%	9.72%	14.49%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Milwaukie

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$18,322,112	\$14,646,710
Allocated pre-SLGRP pooled liability/(surplus)	(1,572,629)	(1,623,300)
Transition liability/(surplus)	(723,067)	(748,467)
Allocated pooled OPSRP UAL	1,360,045	1,036,996
Side account	3,186,510	3,448,513
Net unfunded pension actuarial accrued liability	14,199,951	9,863,426
Combined valuation payroll	9,566,736	9,070,850
Net pension UAL as a percentage of payroll	148%	109%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.80%)	(0.82%)
Side account rate relief	(3.50%)	(3.76%)
Allocated pooled RHIA UAL	\$46,453	\$72,100
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,011,347	\$177,491	17.89%	\$1,051,493	\$188,112
Tier 2 General Service	12.26%	1,214,242	148,866	12.44%	1,268,547	157,807
Total General Service		2,225,589	326,357		2,320,040	345,919
Tier 1 Police & Fire	21.37%	1,135,361	242,627	21.53%	1,180,176	254,092
Tier 2 Police & Fire	18.95%	927,257	175,715	19.00%	877,119	166,653
Total Police & Fire		2,062,618	418,342		2,057,295	420,745
Total		\$4,288,207	\$744,699		\$4,377,335	\$766,664
Employer normal cost rate						
General Service			14.66%			14.91%
Police & Fire			20.28%			20.45%
Aggregate (Default)			17.37%			17.51%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$748,467)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.79%)
B. Actual employer payroll	4,444,011
C. Payment to transition liability/(surplus)	(35,108)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.87%)
B. Actual employer payroll	4,682,724
C. Payment to transition liability/(surplus)	(40,739)
4. Supplemental payment to transition liability	0
5. Interest	(50,447)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$723,067)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(723,067)	(748,467)
2. Combined valuation payroll	9,566,736	9,070,850
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.80%)	(0.82%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$3,448,513	\$3,448,513
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(332,732)	(332,732)
5. Side account earnings during 2015		71,729	71,729
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$3,186,510	\$3,186,510

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$3,186,510	\$3,448,513
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,186,510	\$3,448,513

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$3,186,510	\$3,448,513
2. Combined valuation payroll	9,566,736	9,070,850
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(3.50%)	(3.76%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mist-Birkenfeld Rural Fire Protection District/2752
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mist-Birkenfeld Rural Fire Protection District/2752

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mist-Birkenfeld Rural Fire Protection District/2752

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mist-Birkenfeld Rural Fire Protection District -- #2752

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Mist-Birkenfeld Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mist-Birkenfeld Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mist-Birkenfeld Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.41%	12.26%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(15.22%)	(15.22%)	(15.22%)	(15.22%)	(15.22%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	8.49%	4.34%	11.03%	0.10%	4.87%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.99%	4.84%	11.53%	0.53%	5.30%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mist-Birkenfeld Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$243,555	\$202,768
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(183,900)	(185,478)
Allocated pooled OPSRP UAL	18,079	14,356
Side account	0	0
Net unfunded pension actuarial accrued liability	77,734	31,646
Combined valuation payroll	127,170	125,576
Net pension UAL as a percentage of payroll	61%	25%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(15.22%)	(14.60%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$617	\$998
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	27,961	3,428	12.44%	28,010	3,484
Total General Service		27,961	3,428		28,010	3,484
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	45,656	8,652	19.00%	44,629	8,480
Total Police & Fire		45,656	8,652		44,629	8,480
Total		\$73,617	\$12,080		\$72,639	\$11,964
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			18.95%			19.00%
Aggregate (Default)			16.41%			16.47%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$185,478)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.23%)
B. Actual employer payroll	59,183
C. Payment to transition liability/(surplus)	(4,871)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(17.59%)
B. Actual employer payroll	61,488
C. Payment to transition liability/(surplus)	(9,537)
4. Supplemental payment to transition liability	0
5. Interest	(12,830)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$183,900)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(183,900)	(185,478)
2. Combined valuation payroll	127,170	125,576
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(15.22%)	(14.60%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	127,170	125,576
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mohawk Valley Rural Fire District/2758
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mohawk Valley Rural Fire District/2758

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mohawk Valley Rural Fire District/2758

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mohawk Valley Rural Fire District -- #2758

September 2016

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Executive Summary

Milliman has prepared this report for Mohawk Valley Rural Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mohawk Valley Rural Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mohawk Valley Rural Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(9.66%)	(9.66%)	(9.66%)	(9.66%)	(9.66%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	11.69%	10.72%	15.85%	3.93%	8.70%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.19%	11.22%	16.35%	4.36%	9.13%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mohawk Valley Rural Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$171,182	\$147,490
Allocated pre-SLGRP pooled liability/(surplus)	(14,693)	(16,346)
Transition liability/(surplus)	(82,026)	(83,562)
Allocated pooled OPSRP UAL	12,707	10,442
Side account	0	0
Net unfunded pension actuarial accrued liability	87,170	58,024
Combined valuation payroll	89,381	91,342
Net pension UAL as a percentage of payroll	98%	64%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(9.66%)	(9.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$434	\$726
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$83,562)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.64%)
B. Actual employer payroll	42,265
C. Payment to transition liability/(surplus)	(3,229)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.89%)
B. Actual employer payroll	40,752
C. Payment to transition liability/(surplus)	(4,030)
4. Supplemental payment to transition liability	0
5. Interest	(5,723)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$82,026)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(82,026)	(83,562)
2. Combined valuation payroll	89,381	91,342
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.66%)	(9.04%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	89,381	91,342
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Molalla Rural Fire Protection District #73/2568
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Molalla Rural Fire Protection District #73/2568

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Molalla Rural Fire Protection District #73/2568

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Molalla Rural Fire Protection District #73 -- #2568

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Molalla Rural Fire Protection District #73 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Molalla Rural Fire Protection District #73.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Molalla Rural Fire Protection District #73

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.37%	14.81%	19.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	2.16%	2.16%	2.16%	2.16%	2.16%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	28.83%	24.27%	28.83%	17.48%	22.25%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	29.33%	24.77%	29.33%	17.91%	22.68%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Molalla Rural Fire Protection District #73

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,054,391	\$1,428,766
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	220,609	242,092
Allocated pooled OPSRP UAL	152,497	101,158
Side account	0	0
Net unfunded pension actuarial accrued liability	2,427,497	1,772,016
Combined valuation payroll	1,072,683	884,849
Net pension UAL as a percentage of payroll	226%	200%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	2.16%	2.70%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,209	\$7,033
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	98,117	20,968	21.53%	94,208	20,283
Tier 2 Police & Fire	18.95%	462,274	87,601	19.00%	429,319	81,571
Total Police & Fire		560,391	108,569		523,527	101,854
Total		\$560,391	\$108,569		\$523,527	\$101,854
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.37%			19.46%
Aggregate (Default)			19.37%			19.46%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$242,092
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.20%
B. Actual employer payroll	449,403
C. Payment to transition liability/(surplus)	14,381
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	4.30%
B. Actual employer payroll	523,099
C. Payment to transition liability/(surplus)	22,493
4. Supplemental payment to transition liability	0
5. Interest	15,391
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$220,609

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	220,609	242,092
2. Combined valuation payroll	1,072,683	884,849
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.16%	2.70%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,072,683	884,849
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Monmouth/2157

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Monmouth/2157

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Monmouth/2157

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Monmouth -- #2157

September 2016

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Executive Summary

Milliman has prepared this report for City of Monmouth to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Monmouth.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Monmouth

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.23%	15.29%	20.69%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(4.94%)	(4.94%)	(4.94%)	(4.94%)	(4.94%)
Net pension contribution rate	18.59%	17.65%	23.05%	10.38%	15.15%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.09%	18.15%	23.55%	10.81%	15.58%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Monmouth

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$6,288,617	\$5,365,725
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	466,802	379,897
Side account	1,540,700	1,661,872
Net unfunded pension actuarial accrued liability	5,214,719	4,083,750
Combined valuation payroll	3,283,548	3,323,046
Net pension UAL as a percentage of payroll	159%	123%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	(4.94%)	(4.94%)
Allocated pooled RHIA UAL	\$15,944	\$26,414
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$728,460	\$127,845	17.89%	\$721,087	\$129,002
Tier 2 General Service	12.26%	542,671	66,531	12.44%	570,100	70,920
Total General Service		1,271,131	194,376		1,291,187	199,922
Tier 1 Police & Fire	21.37%	191,218	40,863	21.53%	186,947	40,250
Tier 2 Police & Fire	18.95%	75,247	14,259	19.00%	71,485	13,582
Total Police & Fire		266,465	55,122		258,432	53,832
Total		\$1,537,596	\$249,498		\$1,549,619	\$253,754
Employer normal cost rate						
General Service			15.29%			15.48%
Police & Fire			20.69%			20.83%
Aggregate (Default)			16.23%			16.38%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	3,283,548	3,323,046
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$1,661,872	\$1,661,872
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(154,840)	(154,840)
5. Side account earnings during 2015		34,668	34,668
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$1,540,700	\$1,540,700

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$1,540,700	\$1,661,872
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,540,700	\$1,661,872

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$1,540,700	\$1,661,872
2. Combined valuation payroll	3,283,548	3,323,046
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(4.94%)	(4.94%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Monroe/2209
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Monroe/2209

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Monroe/2209

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Monroe -- #2209

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Monroe to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Monroe.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Monroe

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(17.27%)	(17.27%)	(17.27%)	(17.27%)	(17.27%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	5.81%	4.84%	9.97%	0.00%	2.82%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	6.31%	5.34%	10.47%	0.43%	3.25%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Monroe

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$195,185	\$0
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(167,275)	(165,764)
Allocated pooled OPSRP UAL	14,488	0
Side account	0	0
Net unfunded pension actuarial accrued liability	42,398	(165,764)
Combined valuation payroll	101,914	0
Net pension UAL as a percentage of payroll	42%	0%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(17.27%)	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$495	\$0
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$165,764)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(15.26%)
B. Actual employer payroll	34,290
C. Payment to transition liability/(surplus)	(4,245)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(18.77%)
B. Actual employer payroll	47,540
C. Payment to transition liability/(surplus)	(5,914)
4. Supplemental payment to transition liability	0
5. Interest	(11,670)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$167,275)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(167,275)	(165,764)
2. Combined valuation payroll	101,914	0
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(17.27%)	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	101,914	0
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Monroe Fire Department/2555
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Monroe Fire Department/2555

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Monroe Fire Department/2555

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Monroe Fire Department -- #2555

September 2016

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Executive Summary

Milliman has prepared this report for Monroe Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Monroe Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Monroe Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.02%)	(9.02%)	(9.02%)	(9.02%)	(9.02%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.23%	13.09%	17.23%	6.30%	11.07%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.73%	13.59%	17.73%	6.73%	11.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Monroe Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$126,343	\$101,968
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(56,568)	(58,284)
Allocated pooled OPSRP UAL	9,378	7,219
Side account	0	0
Net unfunded pension actuarial accrued liability	79,153	50,903
Combined valuation payroll	65,969	63,150
Net pension UAL as a percentage of payroll	120%	81%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.02%)	(9.12%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$320	\$502
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	65,969	12,501	19.00%	63,150	11,999
Total Police & Fire		65,969	12,501		63,150	11,999
Total		\$65,969	\$12,501		\$63,150	\$11,999
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$58,284)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.91%)
B. Actual employer payroll	30,674
C. Payment to transition liability/(surplus)	(2,733)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.01%)
B. Actual employer payroll	32,514
C. Payment to transition liability/(surplus)	(2,930)
4. Supplemental payment to transition liability	0
5. Interest	(3,947)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$56,568)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(56,568)	(58,284)
2. Combined valuation payroll	65,969	63,150
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.02%)	(9.12%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	65,969	63,150
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Moro/2301
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Moro/2301

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Moro/2301

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Moro -- #2301

September 2016

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Executive Summary

Milliman has prepared this report for City of Moro to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Moro.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Moro

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.38%)	(9.38%)	(9.38%)	(9.38%)	(9.38%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.47%	15.47%	17.86%	5.94%	10.71%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.97%	15.97%	18.36%	6.37%	11.14%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Moro

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$184,772	\$166,939
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(85,970)	(88,596)
Allocated pooled OPSRP UAL	13,716	11,819
Side account	0	0
Net unfunded pension actuarial accrued liability	112,518	90,162
Combined valuation payroll	96,477	103,387
Net pension UAL as a percentage of payroll	117%	87%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.38%)	(8.47%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$468	\$822
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$41,502	\$7,284	17.89%	\$47,591	\$8,514
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		41,502	7,284		47,591	8,514
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$41,502	\$7,284		\$47,591	\$8,514
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$88,596)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.32%)
B. Actual employer payroll	46,258
C. Payment to transition liability/(surplus)	(4,311)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.33%)
B. Actual employer payroll	46,226
C. Payment to transition liability/(surplus)	(4,313)
4. Supplemental payment to transition liability	0
5. Interest	(5,998)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$85,970)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(85,970)	(88,596)
2. Combined valuation payroll	96,477	103,387
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.38%)	(8.47%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	96,477	103,387
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mt Hood Community College/2905
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mt Hood Community College/2905

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mt Hood Community College/2905

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mt Hood Community College -- #2905

September 2016

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Executive Summary

Milliman has prepared this report for Mt Hood Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mt Hood Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mt Hood Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(15.94%)	(15.94%)	(15.94%)	(15.94%)	(15.94%)
Net pension contribution rate	7.65%	7.65%	13.06%	1.14%	5.91%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.15%	8.15%	13.56%	1.57%	6.34%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mt Hood Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$72,009,035	\$57,957,548
Allocated pre-SLGRP pooled liability/(surplus)	6,292,016	6,476,399
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	5,345,209	4,103,428
Side account	56,963,380	59,200,933
Net unfunded pension actuarial accrued liability	26,682,880	9,336,442
Combined valuation payroll	37,598,909	35,893,674
Net pension UAL as a percentage of payroll	71%	26%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(15.94%)	(16.30%)
Allocated pooled RHIA UAL	\$182,567	\$285,304
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$59,200,933	\$59,200,933
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(3,470,219)	(3,470,219)
5. Side account earnings during 2015		1,233,666	1,233,666
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$56,963,380	\$56,963,380

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$56,963,380	\$59,200,933
Side Account 2	0	0
Side Account 3	0	0
Total	\$56,963,380	\$59,200,933

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$56,963,380	\$59,200,933
2. Combined valuation payroll	37,598,909	35,893,674
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(15.94%)	(16.30%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Mt. Vernon/2302
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Mt. Vernon/2302

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Mt. Vernon/2302

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Mt Vernon -- #2302

September 2016

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Executive Summary

Milliman has prepared this report for City of Mt. Vernon to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Mt. Vernon.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Mt. Vernon

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.89%)	(6.89%)	(6.89%)	(6.89%)	(6.89%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.96%	17.96%	20.35%	8.43%	13.20%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.46%	18.46%	20.85%	8.86%	13.63%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Mt. Vernon

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$282,814	\$228,349
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(96,762)	(100,725)
Allocated pooled OPSRP UAL	20,993	16,167
Side account	0	0
Net unfunded pension actuarial accrued liability	207,045	143,791
Combined valuation payroll	147,669	141,419
Net pension UAL as a percentage of payroll	140%	102%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.89%)	(7.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$717	\$1,124
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$67,296	\$11,810	17.89%	\$66,067	\$11,819
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		67,296	11,810		66,067	11,819
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$67,296	\$11,810		\$66,067	\$11,819
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$100,725)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.69%)
B. Actual employer payroll	68,322
C. Payment to transition liability/(surplus)	(5,254)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.53%)
B. Actual employer payroll	72,500
C. Payment to transition liability/(surplus)	(5,460)
4. Supplemental payment to transition liability	0
5. Interest	(6,751)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$96,762)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(96,762)	(100,725)
2. Combined valuation payroll	147,669	141,419
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.89%)	(7.04%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	147,669	141,419
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mulino Water District #23/2778
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mulino Water District #23/2778

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mulino Water District #23/2778

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mulino Water District #23 -- #2778

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Mulino Water District #23 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mulino Water District #23.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mulino Water District #23

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.19%	0.19%	0.19%	0.19%	0.19%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.02%	18.02%	25.70%	13.78%	18.55%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.52%	18.52%	26.20%	14.21%	18.98%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mulino Water District #23

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$123,051	\$100,300
Allocated pre-SLGRP pooled liability/(surplus)	(10,562)	(11,116)
Transition liability/(surplus)	1,187	1,212
Allocated pooled OPSRP UAL	9,134	7,101
Side account	0	0
Net unfunded pension actuarial accrued liability	122,810	97,497
Combined valuation payroll	64,250	62,117
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.19%	0.19%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$312	\$494
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	64,250	7,877	12.44%	62,117	7,727
Total General Service		64,250	7,877		62,117	7,727
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$64,250	\$7,877		\$62,117	\$7,727
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,212
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.16%
B. Actual employer payroll	29,769
C. Payment to transition liability/(surplus)	48
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.19%
B. Actual employer payroll	31,790
C. Payment to transition liability/(surplus)	60
4. Supplemental payment to transition liability	0
5. Interest	83
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,187

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,187	1,212
2. Combined valuation payroll	64,250	62,117
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.19%	0.19%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	64,250	62,117
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Multnomah County Rural Fire Protection District #14/2806
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016

Multnomah County Rural Fire Protection District #14/2806

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Multnomah County Rural Fire Protection District #14/2806

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Multnomah County Rural Fire Protection District #14 -- #2806

September 2016

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Executive Summary

Milliman has prepared this report for Multnomah County Rural Fire Protection District #14 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Multnomah County Rural Fire Protection District #14.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Multnomah County Rural Fire Protection District #14

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.10%)	(0.10%)	(0.10%)	(0.10%)	(0.10%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.73%	17.73%	25.41%	13.49%	18.26%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.23%	18.23%	25.91%	13.92%	18.69%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Multnomah County Rural Fire Protection District #14

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$107,703	\$71,142
Allocated pre-SLGRP pooled liability/(surplus)	(9,244)	(7,885)
Transition liability/(surplus)	(513)	(530)
Allocated pooled OPSRP UAL	7,995	5,037
Side account	0	0
Net unfunded pension actuarial accrued liability	105,941	67,764
Combined valuation payroll	56,236	44,059
Net pension UAL as a percentage of payroll	188%	154%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.10%)	(0.12%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$273	\$350
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	56,236	6,895	12.44%	44,059	5,481
Total General Service		56,236	6,895		44,059	5,481
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$56,236	\$6,895		\$44,059	\$5,481
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$530)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.11%)
B. Actual employer payroll	23,444
C. Payment to transition liability/(surplus)	(26)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.11%)
B. Actual employer payroll	24,851
C. Payment to transition liability/(surplus)	(27)
4. Supplemental payment to transition liability	0
5. Interest	(36)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$513)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(513)	(530)
2. Combined valuation payroll	56,236	44,059
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.10%)	(0.12%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	56,236	44,059
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Multnomah County/2038
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Multnomah County/2038

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Multnomah County/2038

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Multnomah County -- #2038

September 2016

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Executive Summary

Milliman has prepared this report for Multnomah County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Multnomah County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Multnomah County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.21%	14.67%	20.26%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.73%)	(2.73%)	(2.73%)	(2.73%)	(2.73%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.05%	17.51%	23.10%	10.86%	15.63%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.55%	18.01%	23.60%	11.29%	16.06%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Multnomah County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$632,950,824	\$488,703,619
Allocated pre-SLGRP pooled liability/(surplus)	(54,327,615)	(54,163,190)
Transition liability/(surplus)	(85,758,014)	(89,245,776)
Allocated pooled OPSRP UAL	46,983,751	34,600,503
Side account	0	0
Net unfunded pension actuarial accrued liability	539,848,946	379,895,156
Combined valuation payroll	330,489,925	302,658,914
Net pension UAL as a percentage of payroll	163%	126%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.73%)	(2.91%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,604,746	\$2,405,711
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$55,545,488	\$9,748,233	17.89%	\$58,693,660	\$10,500,296
Tier 2 General Service	12.26%	66,551,115	8,159,167	12.44%	66,554,456	8,279,374
Total General Service		122,096,603	17,907,400		125,248,116	18,779,670
Tier 1 Police & Fire	21.37%	25,180,427	5,381,057	21.53%	26,868,635	5,784,817
Tier 2 Police & Fire	18.95%	21,509,569	4,076,063	19.00%	20,701,388	3,933,264
Total Police & Fire		46,689,996	9,457,120		47,570,023	9,718,081
Total		\$168,786,599	\$27,364,520		\$172,818,139	\$28,497,751
Employer normal cost rate						
General Service			14.67%			14.99%
Police & Fire			20.26%			20.43%
Aggregate (Default)			16.21%			16.49%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$89,245,776)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.96%)
B. Actual employer payroll	154,362,420
C. Payment to transition liability/(surplus)	(4,569,128)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.01%)
B. Actual employer payroll	162,848,879
C. Payment to transition liability/(surplus)	(4,901,751)
4. Supplemental payment to transition liability	0
5. Interest	(5,983,117)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$85,758,014)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(85,758,014)	(89,245,776)
2. Combined valuation payroll	330,489,925	302,658,914
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.73%)	(2.91%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	330,489,925	302,658,914
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Multnomah Drainage/2508
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Multnomah Drainage/2508

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Multnomah Drainage/2508

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Multnomah Drainage -- #2508

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Multnomah Drainage to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Multnomah Drainage.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Multnomah Drainage

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.22%	13.22%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.77%	1.77%	1.77%	1.77%	1.77%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.56%	20.56%	27.28%	15.36%	20.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.06%	21.06%	27.78%	15.79%	20.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Multnomah Drainage

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,877,572	\$1,984,627
Allocated pre-SLGRP pooled liability/(surplus)	(246,989)	(219,957)
Transition liability/(surplus)	253,275	280,081
Allocated pooled OPSRP UAL	213,601	140,513
Side account	0	0
Net unfunded pension actuarial accrued liability	3,097,459	2,185,264
Combined valuation payroll	1,502,500	1,229,099
Net pension UAL as a percentage of payroll	206%	178%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.77%	2.25%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$7,296	\$9,770
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$69,446	\$12,188	17.89%	\$63,388	\$11,340
Tier 2 General Service	12.26%	311,352	38,172	12.44%	182,420	22,693
Total General Service		380,798	50,360		245,808	34,033
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$380,798	\$50,360		\$245,808	\$34,033
Employer normal cost rate						
General Service			13.22%			13.85%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.22%			13.85%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$280,081
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.68%
B. Actual employer payroll	649,802
C. Payment to transition liability/(surplus)	23,913
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.83%
B. Actual employer payroll	726,646
C. Payment to transition liability/(surplus)	20,563
4. Supplemental payment to transition liability	0
5. Interest	17,670
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$253,275

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	253,275	280,081
2. Combined valuation payroll	1,502,500	1,229,099
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.77%	2.25%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,502,500	1,229,099
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Myrtle Creek/2197
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Myrtle Creek/2197

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Myrtle Creek/2197

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Myrtle Creek -- #2197

September 2016

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Executive Summary

Milliman has prepared this report for City of Myrtle Creek to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Myrtle Creek.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Myrtle Creek

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.86%	14.85%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(4.15%)	(4.15%)	(4.15%)	(4.15%)	(4.15%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.28%	16.27%	22.79%	9.44%	14.21%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.78%	16.77%	23.29%	9.87%	14.64%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Myrtle Creek

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,928,002	\$1,518,641
Allocated pre-SLGRP pooled liability/(surplus)	(165,485)	(168,311)
Transition liability/(surplus)	(397,328)	(408,747)
Allocated pooled OPSRP UAL	143,115	107,521
Side account	0	0
Net unfunded pension actuarial accrued liability	1,508,304	1,049,104
Combined valuation payroll	1,006,690	940,509
Net pension UAL as a percentage of payroll	150%	112%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(4.15%)	(4.30%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,888	\$7,476
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$152,439	\$26,753	17.89%	\$148,083	\$26,492
Tier 2 General Service	12.26%	158,630	19,448	12.44%	155,356	19,326
Total General Service		311,069	46,201		303,439	45,818
Tier 1 Police & Fire	21.37%	56,642	12,104	21.53%	124,524	26,810
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		56,642	12,104		124,524	26,810
Total		\$367,711	\$58,305		\$427,963	\$72,628
Employer normal cost rate						
General Service			14.85%			15.10%
Police & Fire			21.37%			21.53%
Aggregate (Default)			15.86%			16.97%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$408,747)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.64%)
B. Actual employer payroll	497,015
C. Payment to transition liability/(surplus)	(18,091)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.00%)
B. Actual employer payroll	526,205
C. Payment to transition liability/(surplus)	(21,049)
4. Supplemental payment to transition liability	0
5. Interest	(27,721)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$397,328)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(397,328)	(408,747)
2. Combined valuation payroll	1,006,690	940,509
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.15%)	(4.30%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,006,690	940,509
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Myrtle Point/2183
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Myrtle Point/2183

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Myrtle Point/2183

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Myrtle Point -- #2183

September 2016

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Executive Summary

Milliman has prepared this report for City of Myrtle Point to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Myrtle Point.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Myrtle Point

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.87%	15.18%	19.70%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(6.83%)	(6.83%)	(6.83%)	(6.83%)	(6.83%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.61%	13.92%	18.44%	6.76%	11.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.11%	14.42%	18.94%	7.19%	11.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Myrtle Point

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,469,825	\$2,070,815
Allocated pre-SLGRP pooled liability/(surplus)	(211,991)	(229,509)
Transition liability/(surplus)	(837,404)	(866,787)
Allocated pooled OPSRP UAL	183,334	146,615
Side account	0	0
Net unfunded pension actuarial accrued liability	1,603,764	1,121,134
Combined valuation payroll	1,289,598	1,282,476
Net pension UAL as a percentage of payroll	124%	87%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.83%)	(6.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,262	\$10,194
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$217,064	\$38,095	17.89%	\$203,413	\$36,391
Tier 2 General Service	12.26%	175,950	21,571	12.44%	170,224	21,176
Total General Service		393,014	59,666		373,637	57,567
Tier 1 Police & Fire	21.37%	72,742	15,545	21.53%	66,024	14,215
Tier 2 Police & Fire	18.95%	160,543	30,423	19.00%	151,783	28,839
Total Police & Fire		233,285	45,968		217,807	43,054
Total		\$626,299	\$105,634		\$591,444	\$100,621
Employer normal cost rate						
General Service			15.18%			15.41%
Police & Fire			19.70%			19.77%
Aggregate (Default)			16.87%			17.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$866,787)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.63%)
B. Actual employer payroll	603,824
C. Payment to transition liability/(surplus)	(46,072)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.98%)
B. Actual employer payroll	597,937
C. Payment to transition liability/(surplus)	(41,735)
4. Supplemental payment to transition liability	0
5. Interest	(58,424)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$837,404)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(837,404)	(866,787)
2. Combined valuation payroll	1,289,598	1,282,476
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.83%)	(6.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,289,598	1,282,476
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Nehalem Bay Fire & Rescue/2869
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Nehalem Bay Fire & Rescue/2869

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Nehalem Bay Fire & Rescue/2869

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Nehalem Bay Fire & Rescue -- #2869

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Nehalem Bay Fire & Rescue to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Nehalem Bay Fire & Rescue.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Nehalem Bay Fire & Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.35%	14.81%	21.35%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	28.65%	22.11%	28.65%	15.32%	20.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	29.15%	22.61%	29.15%	15.75%	20.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nehalem Bay Fire & Rescue

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$460,471	\$225,013
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	34,181	15,931
Side account	0	0
Net unfunded pension actuarial accrued liability	494,652	240,944
Combined valuation payroll	240,431	139,353
Net pension UAL as a percentage of payroll	206%	173%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,167	\$1,108
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	75,405	16,114	21.53%	73,941	15,919
Tier 2 Police & Fire	18.95%	790	150	19.00%	462	88
Total Police & Fire		76,195	16,264		74,403	16,007
Total		\$76,195	\$16,264		\$74,403	\$16,007
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.35%			21.51%
Aggregate (Default)			21.35%			21.51%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	240,431	139,353
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	240,431	139,353
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Nehalem Bay Health District/2780
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Nehalem Bay Health District/2780

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Nehalem Bay Health District/2780

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Nehalem Bay Health District -- #2780

September 2016

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Executive Summary

Milliman has prepared this report for Nehalem Bay Health District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Nehalem Bay Health District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Nehalem Bay Health District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.92%)	(2.92%)	(2.92%)	(2.92%)	(2.92%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.43%	17.46%	22.59%	10.67%	15.44%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.93%	17.96%	23.09%	11.10%	15.87%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nehalem Bay Health District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$104,485	\$75,234
Allocated pre-SLGRP pooled liability/(surplus)	(8,968)	(8,338)
Transition liability/(surplus)	(15,159)	(15,488)
Allocated pooled OPSRP UAL	7,756	5,327
Side account	0	0
Net unfunded pension actuarial accrued liability	88,114	56,735
Combined valuation payroll	54,556	46,593
Net pension UAL as a percentage of payroll	162%	122%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.92%)	(3.29%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$265	\$370
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$15,488)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.55%)
B. Actual employer payroll	25,933
C. Payment to transition liability/(surplus)	(402)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.80%)
B. Actual employer payroll	25,933
C. Payment to transition liability/(surplus)	(985)
4. Supplemental payment to transition liability	0
5. Interest	(1,058)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$15,159)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(15,159)	(15,488)
2. Combined valuation payroll	54,556	46,593
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.92%)	(3.29%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	54,556	46,593
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Nesika Beach-Ophir Water District/2858
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Nesika Beach-Ophir Water District/2858

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Nesika Beach-Ophir Water District/2858

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Nesika Beach-Ophir Water District -- #2858

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Nesika Beach-Ophir Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIP),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIP. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Nesika Beach-Ophir Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Nesika Beach-Ophir Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.25%	16.25%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.34%)	(3.34%)	(3.34%)	(3.34%)	(3.34%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.21%	20.21%	23.90%	11.98%	16.75%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.71%	20.71%	24.40%	12.41%	17.18%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nesika Beach-Ophir Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$183,383	\$149,119
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(30,435)	(32,164)
Allocated pooled OPSRP UAL	13,612	10,558
Side account	0	0
Net unfunded pension actuarial accrued liability	166,560	127,513
Combined valuation payroll	95,752	92,351
Net pension UAL as a percentage of payroll	174%	138%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.34%)	(3.44%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$465	\$734
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$46,932	\$8,237	17.89%	\$44,162	\$7,901
Tier 2 General Service	12.26%	15,375	1,885	12.44%	15,624	1,944
Total General Service		62,307	10,122		59,786	9,845
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$62,307	\$10,122		\$59,786	\$9,845
Employer normal cost rate						
General Service			16.25%			16.47%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.25%			16.47%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$32,164)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.28%)
B. Actual employer payroll	44,901
C. Payment to transition liability/(surplus)	(1,922)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.16%)
B. Actual employer payroll	46,400
C. Payment to transition liability/(surplus)	(1,930)
4. Supplemental payment to transition liability	0
5. Interest	(2,123)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$30,435)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(30,435)	(32,164)
2. Combined valuation payroll	95,752	92,351
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.34%)	(3.44%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	95,752	92,351
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Neskowin Water District/2716
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Neskowin Water District/2716

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Neskowin Water District/2716

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Neskowin Water District -- #2716

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Neskowin Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Neskowin Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Neskowin Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.04%)	(0.04%)	(0.04%)	(0.04%)	(0.04%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.31%	20.34%	25.47%	13.55%	18.32%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.81%	20.84%	25.97%	13.98%	18.75%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Neskowin Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$231,426	\$330,210
Allocated pre-SLGRP pooled liability/(surplus)	(19,864)	(36,597)
Transition liability/(surplus)	(455)	(465)
Allocated pooled OPSRP UAL	17,179	23,379
Side account	0	0
Net unfunded pension actuarial accrued liability	228,286	316,527
Combined valuation payroll	120,837	204,502
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.04%)	(0.02%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$587	\$1,626
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$91,191	\$16,314
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		91,191	16,314
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$91,191	\$16,314
Employer normal cost rate						
General Service			14.81%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$465)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.02%)
B. Actual employer payroll	98,719
C. Payment to transition liability/(surplus)	(20)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.02%)
B. Actual employer payroll	113,298
C. Payment to transition liability/(surplus)	(22)
4. Supplemental payment to transition liability	0
5. Interest	(32)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$455)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(455)	(465)
2. Combined valuation payroll	120,837	204,502
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.04%)	(0.02%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	120,837	204,502
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Nestucca Rural Fire District/2674
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Nestucca Rural Fire District/2674

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Nestucca Rural Fire District/2674

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Nestucca Rural Fire District -- #2674

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Nestucca Rural Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Nestucca Rural Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Nestucca Rural Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.97%	14.81%	18.97%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(7.58%)	(7.58%)	(7.58%)	(7.58%)	(7.58%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.96%	12.80%	16.96%	6.01%	10.78%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.46%	13.30%	17.46%	6.44%	11.21%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Nestucca Rural Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$470,020	\$375,906
Allocated pre-SLGRP pooled liability/(surplus)	(40,343)	(41,662)
Transition liability/(surplus)	(176,698)	(181,095)
Allocated pooled OPSRP UAL	34,889	26,614
Side account	0	0
Net unfunded pension actuarial accrued liability	287,868	179,763
Combined valuation payroll	245,417	232,802
Net pension UAL as a percentage of payroll	117%	77%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(7.58%)	(7.69%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,192	\$1,850
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	393	84	21.53%	370	80
Tier 2 Police & Fire	18.95%	59,214	11,221	19.00%	58,049	11,029
Total Police & Fire		59,607	11,305		58,419	11,109
Total		\$59,607	\$11,305		\$58,419	\$11,109
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.97%			19.02%
Aggregate (Default)			18.97%			19.02%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$181,095)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.01%)
B. Actual employer payroll	111,353
C. Payment to transition liability/(surplus)	(7,806)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.60%)
B. Actual employer payroll	117,354
C. Payment to transition liability/(surplus)	(8,919)
4. Supplemental payment to transition liability	0
5. Interest	(12,328)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$176,698)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(176,698)	(181,095)
2. Combined valuation payroll	245,417	232,802
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.58%)	(7.69%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	245,417	232,802
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Netarts Water District/2818
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Netarts Water District/2818

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Netarts Water District/2818

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Netarts Water District -- #2818

September 2016

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Executive Summary

Milliman has prepared this report for Netarts Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Netarts Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Netarts Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.02%)	(2.02%)	(2.02%)	(2.02%)	(2.02%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.81%	15.81%	23.49%	11.57%	16.34%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.31%	16.31%	23.99%	12.00%	16.77%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Netarts Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$266,495	\$179,293
Allocated pre-SLGRP pooled liability/(surplus)	(22,874)	(19,871)
Transition liability/(surplus)	(26,656)	(27,140)
Allocated pooled OPSRP UAL	19,782	12,694
Side account	0	0
Net unfunded pension actuarial accrued liability	236,747	144,976
Combined valuation payroll	139,148	111,038
Net pension UAL as a percentage of payroll	170%	131%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.02%)	(2.42%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$676	\$883
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	97,978	12,012	12.44%	93,539	11,636
Total General Service		97,978	12,012		93,539	11,636
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$97,978	\$12,012		\$93,539	\$11,636
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$27,140)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.03%)
B. Actual employer payroll	53,922
C. Payment to transition liability/(surplus)	(1,095)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.80%)
B. Actual employer payroll	69,433
C. Payment to transition liability/(surplus)	(1,249)
4. Supplemental payment to transition liability	0
5. Interest	(1,860)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$26,656)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(26,656)	(27,140)
2. Combined valuation payroll	139,148	111,038
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.02%)	(2.42%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	139,148	111,038
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Netarts-Oceanside Rural Fire Protection District/2830
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Netarts-Oceanside Rural Fire Protection District/2830

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Netarts-Oceanside Rural Fire Protection District/2830

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Netarts-Oceanside Rural Fire Protection District -- #2830

September 2016

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Executive Summary

Milliman has prepared this report for Netarts-Oceanside Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Netarts-Oceanside Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Netarts-Oceanside Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.57%)	(0.57%)	(0.57%)	(0.57%)	(0.57%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.95%	19.81%	23.95%	13.02%	17.79%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.45%	20.31%	24.45%	13.45%	18.22%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Netarts-Oceanside Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$218,598	\$178,970
Allocated pre-SLGRP pooled liability/(surplus)	(18,763)	(19,835)
Transition liability/(surplus)	(6,144)	(6,216)
Allocated pooled OPSRP UAL	16,226	12,671
Side account	0	0
Net unfunded pension actuarial accrued liability	209,917	165,590
Combined valuation payroll	114,139	110,838
Net pension UAL as a percentage of payroll	184%	149%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.57%)	(0.55%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$554	\$881
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	67,918	12,870	19.00%	65,883	12,518
Total Police & Fire		67,918	12,870		65,883	12,518
Total		\$67,918	\$12,870		\$65,883	\$12,518
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$6,216)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.37%)
B. Actual employer payroll	53,565
C. Payment to transition liability/(surplus)	(198)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.55%)
B. Actual employer payroll	55,173
C. Payment to transition liability/(surplus)	(303)
4. Supplemental payment to transition liability	0
5. Interest	(429)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$6,144)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(6,144)	(6,216)
2. Combined valuation payroll	114,139	110,838
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.57%)	(0.55%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	114,139	110,838
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Netarts-Oceanside Sanitary District/2604
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Netarts-Oceanside Sanitary District/2604

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Netarts-Oceanside Sanitary District/2604

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Netarts-Oceanside Sanitary District -- #2604

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Netarts-Oceanside Sanitary District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Netarts-Oceanside Sanitary District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Netarts-Oceanside Sanitary District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.07%)	(9.07%)	(9.07%)	(9.07%)	(9.07%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	10.49%	10.49%	18.17%	6.25%	11.02%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	10.99%	10.99%	18.67%	6.68%	11.45%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Netarts-Oceanside Sanitary District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$650,481	\$554,659
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(292,677)	(303,025)
Allocated pooled OPSRP UAL	48,285	39,270
Side account	0	0
Net unfunded pension actuarial accrued liability	406,089	290,904
Combined valuation payroll	339,643	343,506
Net pension UAL as a percentage of payroll	120%	85%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.07%)	(8.72%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,649	\$2,730
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$58,818	\$10,523
Tier 2 General Service	12.26%	148,315	18,183	12.44%	132,170	16,442
Total General Service		148,315	18,183		190,988	26,965
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$148,315	\$18,183		\$190,988	\$26,965
Employer normal cost rate						
General Service			12.26%			14.12%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			14.12%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$303,025)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.18%)
B. Actual employer payroll	171,640
C. Payment to transition liability/(surplus)	(15,757)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.01%)
B. Actual employer payroll	166,600
C. Payment to transition liability/(surplus)	(15,010)
4. Supplemental payment to transition liability	0
5. Interest	(20,419)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$292,677)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(292,677)	(303,025)
2. Combined valuation payroll	339,643	343,506
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.07%)	(8.72%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	339,643	343,506
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Newberg/2777
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Newberg/2777

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Newberg/2777

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Newberg -- #2777

September 2016

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Executive Summary

Milliman has prepared this report for City of Newberg to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Newberg.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Newberg

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.25%	13.90%	19.93%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.61%)	(0.61%)	(0.61%)	(0.61%)	(0.61%)
Side account rate relief ²	(3.39%)	(3.39%)	(3.39%)	(3.39%)	(3.39%)
Net pension contribution rate	19.82%	15.47%	21.50%	9.59%	14.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.32%	15.97%	22.00%	10.02%	14.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Newberg

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$12,736,789	\$10,593,856
Allocated pre-SLGRP pooled liability/(surplus)	(1,093,228)	(1,174,121)
Transition liability/(surplus)	(382,525)	(395,453)
Allocated pooled OPSRP UAL	945,448	750,051
Side account	2,142,104	2,327,946
Net unfunded pension actuarial accrued liability	10,064,380	7,446,387
Combined valuation payroll	6,650,407	6,560,878
Net pension UAL as a percentage of payroll	151%	114%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.61%)	(0.60%)
Side account rate relief	(3.39%)	(3.51%)
Allocated pooled RHIA UAL	\$32,292	\$52,150
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$315,273	\$55,330	17.89%	\$150,242	\$26,878
Tier 2 General Service	12.26%	701,627	86,019	12.44%	707,261	87,983
Total General Service		1,016,900	141,349		857,503	114,861
Tier 1 Police & Fire	21.37%	1,063,667	227,306	21.53%	1,079,930	232,509
Tier 2 Police & Fire	18.95%	1,570,442	297,599	19.00%	1,747,825	332,087
Total Police & Fire		2,634,109	524,905		2,827,755	564,596
Total		\$3,651,009	\$666,254		\$3,685,258	\$679,457
Employer normal cost rate						
General Service			13.90%			13.39%
Police & Fire			19.93%			19.97%
Aggregate (Default)			18.25%			18.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$395,453)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.60%)
B. Actual employer payroll	3,225,006
C. Payment to transition liability/(surplus)	(19,350)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.58%)
B. Actual employer payroll	3,494,046
C. Payment to transition liability/(surplus)	(20,266)
4. Supplemental payment to transition liability	0
5. Interest	(26,688)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$382,525)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(382,525)	(395,453)
2. Combined valuation payroll	6,650,407	6,560,878
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.61%)	(0.60%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$2,327,946	\$2,327,946
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(233,111)	(233,111)
5. Side account earnings during 2015		48,269	48,269
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$2,142,104	\$2,142,104

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$2,142,104	\$2,327,946
Side Account 2	0	0
Side Account 3	0	0
Total	\$2,142,104	\$2,327,946

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$2,142,104	\$2,327,946
2. Combined valuation payroll	6,650,407	6,560,878
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(3.39%)	(3.51%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Newport/2276
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Newport/2276

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Newport/2276

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Newport -- #2276

September 2016

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Executive Summary

Milliman has prepared this report for City of Newport to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Newport.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Newport

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.90%	14.81%	19.90%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(6.54%)	(6.54%)	(6.54%)	(6.54%)	(6.54%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.93%	13.84%	18.93%	7.05%	11.82%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.43%	14.34%	19.43%	7.48%	12.25%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Newport

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,068,822	\$3,831,480
Allocated pre-SLGRP pooled liability/(surplus)	(349,236)	(424,644)
Transition liability/(surplus)	(1,320,312)	(1,365,923)
Allocated pooled OPSRP UAL	302,027	271,271
Side account	0	0
Net unfunded pension actuarial accrued liability	2,701,301	2,312,184
Combined valuation payroll	2,124,501	2,372,873
Net pension UAL as a percentage of payroll	127%	97%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.54%)	(5.69%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$10,316	\$18,861
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	404,138	86,364	21.53%	723,849	155,845
Tier 2 Police & Fire	18.95%	620,085	117,506	19.00%	628,452	119,406
Total Police & Fire		1,024,223	203,870		1,352,301	275,251
Total		\$1,024,223	\$203,870		\$1,352,301	\$275,251
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.90%			20.35%
Aggregate (Default)			19.90%			20.35%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,365,923)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.44%)
B. Actual employer payroll	886,319
C. Payment to transition liability/(surplus)	(65,942)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.09%)
B. Actual employer payroll	1,178,710
C. Payment to transition liability/(surplus)	(71,784)
4. Supplemental payment to transition liability	0
5. Interest	(92,115)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,320,312)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,320,312)	(1,365,923)
2. Combined valuation payroll	2,124,501	2,372,873
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.54%)	(5.69%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,124,501	2,372,873
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Central Oregon Intergovernmental Council/2569
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

As of January 1, 2016, you joined the State & Local Government Rate Pool (SLGRP). This report shows the calculations related to joining the SLGRP and reflects that transition in the results presented. This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- The development of your transition liability or surplus upon joining the SLGRP,
- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Central Oregon Intergovernmental Council/2569

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Central Oregon Intergovernmental Council/2569

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott D. Preppernau'.

Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Central Oregon Intergovernmental Council -- #2569

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Central Oregon Intergovernmental Council to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Central Oregon Intergovernmental Council.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Central Oregon Intergovernmental Council

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.76%	13.76%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.78%)	(10.78%)	(10.78%)	(10.78%)	(10.78%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	10.28%	10.28%	16.46%	4.54%	9.31%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	10.78%	10.78%	16.96%	4.97%	9.74%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Central Oregon Intergovernmental Council

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL ¹	\$9,946,746	\$1,928,375
Allocated pre-SLGRP pooled liability/(surplus)	0	N/A
Transition liability/(surplus)	(7,203,707)	N/A
Allocated pooled OPSRP UAL	738,340	511,923
Side account	0	0
Net unfunded pension actuarial accrued liability	3,481,379	2,440,298
Combined valuation payroll	5,193,581	4,477,917
Net pension UAL as a percentage of payroll	67%	55%
Pre-SLGRP pooled rate	0.00%	N/A
Transition rate	(10.78%)	N/A
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$25,218	\$35,593
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of the Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

¹ The UAL shown as of December 31, 2014 is the UAL as an independent employer, not as a member of the SLGRP.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Joining the SLGRP

As of December 31, 2015, Central Oregon Intergovernmental Council was an independent employer, but joined the SLGRP effective January 1, 2016. Since the contribution rate effective July 1, 2017 is based on the SLGRP's contribution rate adjusted for any transition liability or surplus, this report shows the valuation results for the SLGRP. However, this section of the report summarizes your experience as an independent employer through December 31, 2015 and the calculation of the transition liability or surplus effective January 1, 2016 when you joined the SLGRP.

Funded Status and UAL as an Independent Employer

Tier 1/Tier 2 Pension	December 31, 2015	December 31, 2014
1. Actuarial accrued liability	\$14,801,584	\$13,924,080
2. Actuarial value of assets	12,058,545	11,995,705
3. Unfunded accrued liability (1. – 2.)	2,743,039	1,928,375
4. Funded percentage (2. ÷ 1.)	81%	86%
5. Combined valuation payroll	\$5,193,581	\$4,477,917
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	53%	43%

Joining the SLGRP

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2014	\$13,924,080
b. Normal cost at December 31, 2014 (excluding assumed expenses)	265,818
c. Benefit payments during 2015	(513,234)
d. Interest at 7.50% to December 31, 2015	1,035,028
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	14,711,692
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2015 (e. + f.)	14,711,692
2. Actuarial accrued liability at December 31, 2015	14,801,584
3. Gain/(loss) on actuarial accrued liability (1.g. – 2.)	(89,892)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2014	11,995,705
b. Contributions for 2015 ¹	213,445
c. Benefit payments and expenses during 2015	(517,229)
d. Interest at 7.50% to December 31, 2015	888,286
e. Expected actuarial value of assets at December 31, 2015 (a. + b. + c. + d.)	12,580,206
5. Actuarial value of assets at December 31, 2015	12,058,545
6. Gain/(loss) on actuarial value of assets (5. - 4.e.)	(521,661)
7. Total actuarial gain/(loss) (3. + 6.)	(\$611,553)

¹ Includes rate relief from side accounts.

Joining the SLGRP

Calculation of Transition Liability

An employer's UAL at the date it joins the SLGRP is allocated between the SLGRP and an employer-specific transition liability or surplus. This allocation ensures that the SLGRP UAL rate developed at the merger date is not affected positively or negatively by merging employers. The transition liability or surplus can be thought of as a rate-pooling mechanism that ensures each employer in the SLGRP is on a comparable basis. Each rate-setting valuation develops a rate charge or offset to amortize the transition liability or surplus initially calculated at the time of SLGRP entry over a set time period as a level percent of projected payroll.

The table below shows the calculation of the transition liability or surplus as of the January 1, 2016 SLGRP merger date.

Tier 1/Tier 2 Pension

	SLGRP
1. UAL prior to new employers	\$10,703,722,937
2. Combined valuation payroll prior to new employers	\$5,588,858,524
3. UAL as a percentage of payroll (1. ÷ 2.)	191.52%
Central Oregon Intergovernmental Council	
4. Employer UAL as an independent employer	\$2,743,039
5. Employer combined valuation payroll	\$5,193,581
6. UAL allocated to SLGRP (3. × 5.)	\$9,946,746
7. UAL allocated to transition liability (4. - 5.)	(\$7,203,707)
8. UAL after joining SLGRP (6. + 7.)	\$2,743,039

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate at December 31, 2015

	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$541,215	\$94,983
Tier 2 General Service	12.26%	1,373,789	168,427
Total General Service		1,915,004	263,410
Tier 1 Police & Fire	21.37%	0	0
Tier 2 Police & Fire	18.95%	0	0
Total Police & Fire		0	0
Total		\$1,915,004	\$263,410
Employer normal cost rate			
General Service			13.76%
Police & Fire			19.94%
Aggregate (Default)			13.76%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide report.

Transition Liability Information

Development of Transition Liability or Surplus Rate

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below develops the contribution rate for the transition liability or surplus. The calculation amortizes the transition liability or surplus over a fixed period ending 18 years from the date the employer joined the pool.

	December 31, 2015
1. Total transition liability/(surplus)	(7,203,707)
2. Combined valuation payroll	5,193,581
3. Regular amortization factor	12.861
4. Total transition liability/(surplus) rate	(10.78%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	5,193,581	4,477,917
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Weston/2206

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

As of January 1, 2016, you joined the State & Local Government Rate Pool (SLGRP). This report shows the calculations related to joining the SLGRP and reflects that transition in the results presented.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- The development of your transition liability or surplus upon joining the SLGRP,
- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Weston/2206

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Weston/2206

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott D. Preppernau', with a stylized flourish at the end.

Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Weston -- #2206

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Weston to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Weston.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Weston

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.38%)	(10.38%)	(10.38%)	(10.38%)	(10.38%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.18%	9.18%	16.86%	4.94%	9.71%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	9.68%	9.68%	17.36%	5.37%	10.14%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Weston

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL ¹	\$344,646	\$49,819
Allocated pre-SLGRP pooled liability/(surplus)	0	N/A
Transition liability/(surplus)	(240,128)	N/A
Allocated pooled OPSRP UAL	25,583	17,881
Side account	0	0
Net unfunded pension actuarial accrued liability	130,101	67,700
Combined valuation payroll	179,953	156,407
Net pension UAL as a percentage of payroll	72%	43%
Pre-SLGRP pooled rate	0.00%	N/A
Transition rate	(10.38%)	N/A
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$874	\$1,243
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of the Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

¹ The UAL shown as of December 31, 2014 is the UAL as an independent employer, not as a member of the SLGRP.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Joining the SLGRP

As of December 31, 2015, City of Weston was an independent employer, but joined the SLGRP effective January 1, 2016. Since the contribution rate effective July 1, 2017 is based on the SLGRP's contribution rate adjusted for any transition liability or surplus, this report shows the valuation results for the SLGRP. However, this section of the report summarizes your experience as an independent employer through December 31, 2015 and the calculation of the transition liability or surplus effective January 1, 2016 when you joined the SLGRP.

Funded Status and UAL as an Independent Employer

Tier 1/Tier 2 Pension	December 31, 2015	December 31, 2014
1. Actuarial accrued liability	\$1,120,919	\$1,100,166
2. Actuarial value of assets	1,016,401	1,050,347
3. Unfunded accrued liability (1. – 2.)	104,518	49,819
4. Funded percentage (2. ÷ 1.)	91%	95%
5. Combined valuation payroll	\$179,953	\$156,407
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	58%	32%

Joining the SLGRP

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2014	\$1,100,166
b. Normal cost at December 31, 2014 (excluding assumed expenses)	4,524
c. Benefit payments during 2015	(73,821)
d. Interest at 7.50% to December 31, 2015	79,914
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	1,110,783
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2015 (e. + f.)	1,110,783
2. Actuarial accrued liability at December 31, 2015	1,120,919
3. Gain/(loss) on actuarial accrued liability (1.g. – 2.)	(10,136)
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2014	1,050,347
b. Contributions for 2015 ¹	(6,406)
c. Benefit payments and expenses during 2015	(74,396)
d. Interest at 7.50% to December 31, 2015	75,746
e. Expected actuarial value of assets at December 31, 2015 (a. + b. + c. + d.)	1,045,292
5. Actuarial value of assets at December 31, 2015	1,016,401
6. Gain/(loss) on actuarial value of assets (5. - 4.e.)	(28,892)
7. Total actuarial gain/(loss) (3. + 6.)	(\$39,028)

¹ Includes rate relief from side accounts.

Joining the SLGRP

Calculation of Transition Liability

An employer's UAL at the date it joins the SLGRP is allocated between the SLGRP and an employer-specific transition liability or surplus. This allocation ensures that the SLGRP UAL rate developed at the merger date is not affected positively or negatively by merging employers. The transition liability or surplus can be thought of as a rate-pooling mechanism that ensures each employer in the SLGRP is on a comparable basis. Each rate-setting valuation develops a rate charge or offset to amortize the transition liability or surplus initially calculated at the time of SLGRP entry over a set time period as a level percent of projected payroll.

The table below shows the calculation of the transition liability or surplus as of the January 1, 2016 SLGRP merger date.

Tier 1/Tier 2 Pension

	SLGRP
1. UAL prior to new employers	\$10,703,722,937
2. Combined valuation payroll prior to new employers	\$5,588,858,524
3. UAL as a percentage of payroll (1. ÷ 2.)	191.52%
	City of Weston
4. Employer UAL as an independent employer	\$104,518
5. Employer combined valuation payroll	\$179,953
6. UAL allocated to SLGRP (3. × 5.)	\$344,646
7. UAL allocated to transition liability (4. - 5.)	(\$240,128)
8. UAL after joining SLGRP (6. + 7.)	\$104,518

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate at December 31, 2015

	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0
Tier 2 General Service	12.26%	33,621	4,122
Total General Service		33,621	4,122
Tier 1 Police & Fire	21.37%	0	0
Tier 2 Police & Fire	18.95%	0	0
Total Police & Fire		0	0
Total		\$33,621	\$4,122
Employer normal cost rate			
General Service			12.26%
Police & Fire			19.94%
Aggregate (Default)			12.26%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide report.

Transition Liability Information

Development of Transition Liability or Surplus Rate

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below develops the contribution rate for the transition liability or surplus. The calculation amortizes the transition liability or surplus over a fixed period ending 18 years from the date the employer joined the pool.

	December 31, 2015
1. Total transition liability/(surplus)	(240,128)
2. Combined valuation payroll	179,953
3. Regular amortization factor	12.861
4. Total transition liability/(surplus) rate	(10.38%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	179,953	156,407
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Mosier Fire District/2873
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

As of January 1, 2016, you joined the State & Local Government Rate Pool (SLGRP). This report shows the calculations related to joining the SLGRP and reflects that transition in the results presented. This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- The development of your transition liability or surplus upon joining the SLGRP,
- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Mosier Fire District/2873

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Mosier Fire District/2873

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott D. Preppernau'.

Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Mosier Fire District -- #2873

September 2016

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Executive Summary

Milliman has prepared this report for Mosier Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Mosier Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Mosier Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(14.41%)	(14.41%)	(14.41%)	(14.41%)	(14.41%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	8.67%	7.70%	12.83%	0.91%	5.68%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	9.17%	8.20%	13.33%	1.34%	6.11%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Mosier Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL ¹	\$76,717	\$1,516
Allocated pre-SLGRP pooled liability/(surplus)	0	N/A
Transition liability/(surplus)	(74,220)	N/A
Allocated pooled OPSRP UAL	5,695	4,405
Side account	0	0
Net unfunded pension actuarial accrued liability	8,192	5,921
Combined valuation payroll	40,057	38,534
Net pension UAL as a percentage of payroll	20%	15%
Pre-SLGRP pooled rate	0.00%	N/A
Transition rate	(14.41%)	N/A
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$195	\$306
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of the Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

¹ The UAL shown as of December 31, 2014 is the UAL as an independent employer, not as a member of the SLGRP.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Joining the SLGRP

As of December 31, 2015, Mosier Fire District was an independent employer, but joined the SLGRP effective January 1, 2016. Since the contribution rate effective July 1, 2017 is based on the SLGRP's contribution rate adjusted for any transition liability or surplus, this report shows the valuation results for the SLGRP. However, this section of the report summarizes your experience as an independent employer through December 31, 2015 and the calculation of the transition liability or surplus effective January 1, 2016 when you joined the SLGRP.

Funded Status and UAL as an Independent Employer

Tier 1/Tier 2 Pension	December 31, 2015	December 31, 2014
1. Actuarial accrued liability	\$0	\$0
2. Actuarial value of assets	(2,497)	(1,516)
3. Unfunded accrued liability (1. – 2.)	2,497	1,516
4. Funded percentage (2. ÷ 1.)	0%	0%
5. Combined valuation payroll	\$40,057	\$38,534
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	6%	4%

Joining the SLGRP

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2014	\$0
b. Normal cost at December 31, 2014 (excluding assumed expenses)	0
c. Benefit payments during 2015	0
d. Interest at 7.50% to December 31, 2015	0
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	0
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2015 (e. + f.)	0
2. Actuarial accrued liability at December 31, 2015	0
3. Gain/(loss) on actuarial accrued liability (1.g. – 2.)	0
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2014	(1,516)
b. Contributions for 2015 ¹	(882)
c. Benefit payments and expenses during 2015	0
d. Interest at 7.50% to December 31, 2015	(147)
e. Expected actuarial value of assets at December 31, 2015 (a. + b. + c. + d.)	(2,544)
5. Actuarial value of assets at December 31, 2015	(2,497)
6. Gain/(loss) on actuarial value of assets (5. - 4.e.)	47
7. Total actuarial gain/(loss) (3. + 6.)	\$47

¹ Includes rate relief from side accounts.

Joining the SLGRP

Calculation of Transition Liability

An employer's UAL at the date it joins the SLGRP is allocated between the SLGRP and an employer-specific transition liability or surplus. This allocation ensures that the SLGRP UAL rate developed at the merger date is not affected positively or negatively by merging employers. The transition liability or surplus can be thought of as a rate-pooling mechanism that ensures each employer in the SLGRP is on a comparable basis. Each rate-setting valuation develops a rate charge or offset to amortize the transition liability or surplus initially calculated at the time of SLGRP entry over a set time period as a level percent of projected payroll.

The table below shows the calculation of the transition liability or surplus as of the January 1, 2016 SLGRP merger date.

Tier 1/Tier 2 Pension

	SLGRP
1. UAL prior to new employers	\$10,703,722,937
2. Combined valuation payroll prior to new employers	\$5,588,858,524
3. UAL as a percentage of payroll (1. ÷ 2.)	191.52%
	Mosier Fire District
4. Employer UAL as an independent employer	\$2,497
5. Employer combined valuation payroll	\$40,057
6. UAL allocated to SLGRP (3. × 5.)	\$76,717
7. UAL allocated to transition liability (4. - 5.)	(\$74,220)
8. UAL after joining SLGRP (6. + 7.)	\$2,497

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate at December 31, 2015

	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0
Tier 2 General Service	12.26%	0	0
Total General Service		0	0
Tier 1 Police & Fire	21.37%	0	0
Tier 2 Police & Fire	18.95%	0	0
Total Police & Fire		0	0
Total		\$0	\$0
Employer normal cost rate			
General Service			14.81%
Police & Fire			19.94%
Aggregate (Default)			15.78%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide report.

Transition Liability Information

Development of Transition Liability or Surplus Rate

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below develops the contribution rate for the transition liability or surplus. The calculation amortizes the transition liability or surplus over a fixed period ending 18 years from the date the employer joined the pool.

	December 31, 2015
1. Total transition liability/(surplus)	(74,220)
2. Combined valuation payroll	40,057
3. Regular amortization factor	12.861
4. Total transition liability/(surplus) rate	(14.41%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	40,057	38,534
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Weston Cemetery/2686

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

As of January 1, 2016, you joined the State & Local Government Rate Pool (SLGRP). This report shows the calculations related to joining the SLGRP and reflects that transition in the results presented.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- The development of your transition liability or surplus upon joining the SLGRP,
- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Weston Cemetery/2686

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Weston Cemetery/2686

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matthew R. Larrabee, FSA, EA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott D. Preppernau', with a stylized flourish at the end.

Scott D. Preppernau, FSA, EA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Weston Cemetery -- #2686

September 2016

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Executive Summary

Milliman has prepared this report for Weston Cemetery to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Weston Cemetery.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Weston Cemetery

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(11.12%)	(11.12%)	(11.12%)	(11.12%)	(11.12%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	8.44%	8.44%	16.12%	4.20%	8.97%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.94%	8.94%	16.62%	4.63%	9.40%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaces many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Weston Cemetery

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL ¹	\$52,626	\$8,406
Allocated pre-SLGRP pooled liability/(surplus)	0	N/A
Transition liability/(surplus)	(39,295)	N/A
Allocated pooled OPSRP UAL	3,906	6,869
Side account	0	0
Net unfunded pension actuarial accrued liability	17,237	15,275
Combined valuation payroll	27,478	60,088
Net pension UAL as a percentage of payroll	63%	25%
Pre-SLGRP pooled rate	0.00%	N/A
Transition rate	(11.12%)	N/A
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$133	\$478
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of the Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

¹ The UAL shown as of December 31, 2014 is the UAL as an independent employer, not as a member of the SLGRP.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Joining the SLGRP

As of December 31, 2015, Weston Cemetery was an independent employer, but joined the SLGRP effective January 1, 2016. Since the contribution rate effective July 1, 2017 is based on the SLGRP's contribution rate adjusted for any transition liability or surplus, this report shows the valuation results for the SLGRP. However, this section of the report summarizes your experience as an independent employer through December 31, 2015 and the calculation of the transition liability or surplus effective January 1, 2016 when you joined the SLGRP.

Funded Status and UAL as an Independent Employer

Tier 1/Tier 2 Pension	December 31, 2015	December 31, 2014
1. Actuarial accrued liability	\$122,712	\$120,512
2. Actuarial value of assets	109,381	112,106
3. Unfunded accrued liability (1. – 2.)	13,331	8,406
4. Funded percentage (2. ÷ 1.)	89%	93%
5. Combined valuation payroll	\$27,478	\$60,088
6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.)	49%	14%

Joining the SLGRP

Actuarial Gain or Loss since Prior Valuation

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

1. Expected actuarial accrued liability	
a. Actuarial accrued liability at December 31, 2014	\$120,512
b. Normal cost at December 31, 2014 (excluding assumed expenses)	2,656
c. Benefit payments during 2015	(8,510)
d. Interest at 7.50% to December 31, 2015	8,819
e. Expected actuarial accrued liability before changes (a. + b. + c. + d.)	123,477
f. Change in actuarial accrued liability due to assumption, method, and plan changes	0
g. Expected actuarial accrued liability at December 31, 2015 (e. + f.)	123,477
2. Actuarial accrued liability at December 31, 2015	122,712
3. Gain/(loss) on actuarial accrued liability (1.g. – 2.)	765
4. Expected actuarial value of assets	
a. Actuarial value of assets at December 31, 2014	112,106
b. Contributions for 2015 ¹	2,031
c. Benefit payments and expenses during 2015	(8,576)
d. Interest at 7.50% to December 31, 2015	8,163
e. Expected actuarial value of assets at December 31, 2015 (a. + b. + c. + d.)	113,724
5. Actuarial value of assets at December 31, 2015	109,381
6. Gain/(loss) on actuarial value of assets (5. - 4.e.)	(4,343)
7. Total actuarial gain/(loss) (3. + 6.)	(\$3,578)

¹ Includes rate relief from side accounts.

Joining the SLGRP

Calculation of Transition Liability

An employer's UAL at the date it joins the SLGRP is allocated between the SLGRP and an employer-specific transition liability or surplus. This allocation ensures that the SLGRP UAL rate developed at the merger date is not affected positively or negatively by merging employers. The transition liability or surplus can be thought of as a rate-pooling mechanism that ensures each employer in the SLGRP is on a comparable basis. Each rate-setting valuation develops a rate charge or offset to amortize the transition liability or surplus initially calculated at the time of SLGRP entry over a set time period as a level percent of projected payroll.

The table below shows the calculation of the transition liability or surplus as of the January 1, 2016 SLGRP merger date.

Tier 1/Tier 2 Pension

	SLGRP
1. UAL prior to new employers	\$10,703,722,937
2. Combined valuation payroll prior to new employers	\$5,588,858,524
3. UAL as a percentage of payroll (1. ÷ 2.)	191.52%
	Weston Cemetery
4. Employer UAL as an independent employer	\$13,331
5. Employer combined valuation payroll	\$27,478
6. UAL allocated to SLGRP (3. × 5.)	\$52,626
7. UAL allocated to transition liability (4. - 5.)	(\$39,295)
8. UAL after joining SLGRP (6. + 7.)	\$13,331

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate at December 31, 2015

	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0
Tier 2 General Service	12.26%	23,590	2,892
Total General Service		23,590	2,892
Tier 1 Police & Fire	21.37%	0	0
Tier 2 Police & Fire	18.95%	0	0
Total Police & Fire		0	0
Total		\$23,590	\$2,892
Employer normal cost rate			
General Service			12.26%
Police & Fire			19.94%
Aggregate (Default)			12.26%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide report.

Transition Liability Information

Development of Transition Liability or Surplus Rate

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below develops the contribution rate for the transition liability or surplus. The calculation amortizes the transition liability or surplus over a fixed period ending 18 years from the date the employer joined the pool.

	December 31, 2015
1. Total transition liability/(surplus)	(39,295)
2. Combined valuation payroll	27,478
3. Regular amortization factor	12.861
4. Total transition liability/(surplus) rate	(11.12%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	27,478	60,088
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

NORCOM/2837

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
NORCOM/2837

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
NORCOM/2837

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

NORCOM -- #2837

September 2016

Secondary Employers

2775 Silver Falls 9-1-1

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Executive Summary

Milliman has prepared this report for NORCOM to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to NORCOM.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for NORCOM

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.43%	14.43%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.05%)	(5.05%)	(5.05%)	(5.05%)	(5.05%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.68%	16.68%	22.19%	10.27%	15.04%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.18%	17.18%	22.69%	10.70%	15.47%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

NORCOM

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,378,294	\$1,873,697
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(595,634)	(631,885)
Allocated pooled OPSRP UAL	176,540	132,659
Side account	0	0
Net unfunded pension actuarial accrued liability	1,959,200	1,374,471
Combined valuation payroll	1,241,806	1,160,399
Net pension UAL as a percentage of payroll	158%	118%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.05%)	(5.38%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,030	\$9,224
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$170,409	\$29,907	17.89%	\$175,242	\$31,351
Tier 2 General Service	12.26%	244,444	29,969	12.44%	272,122	33,852
Total General Service		414,853	59,876		447,364	65,203
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$414,853	\$59,876		\$447,364	\$65,203
Employer normal cost rate						
General Service			14.43%			14.57%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.43%			14.57%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$631,885)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.73%)
B. Actual employer payroll	631,230
C. Payment to transition liability/(surplus)	(42,482)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.51%)
B. Actual employer payroll	641,103
C. Payment to transition liability/(surplus)	(35,325)
4. Supplemental payment to transition liability	0
5. Interest	(41,556)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$595,634)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(595,634)	(631,885)
2. Combined valuation payroll	1,241,806	1,160,399
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.05%)	(5.38%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,241,806	1,160,399
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of North Bend/2292
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of North Bend/2292

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of North Bend/2292

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of North Bend -- #2292

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of North Bend to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of North Bend.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of North Bend

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.36%	14.84%	19.81%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.86%)	(2.86%)	(2.86%)	(2.86%)	(2.86%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.07%	17.55%	22.52%	10.73%	15.50%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.57%	18.05%	23.02%	11.16%	15.93%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of North Bend

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$6,870,196	\$5,914,564
Allocated pre-SLGRP pooled liability/(surplus)	(589,685)	(655,513)
Transition liability/(surplus)	(976,471)	(1,002,344)
Allocated pooled OPSRP UAL	509,973	418,755
Side account	0	0
Net unfunded pension actuarial accrued liability	5,814,013	4,675,462
Combined valuation payroll	3,587,215	3,662,947
Net pension UAL as a percentage of payroll	162%	128%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.86%)	(2.70%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$17,418	\$29,115
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$421,345	\$73,946	17.89%	\$473,383	\$84,688
Tier 2 General Service	12.26%	443,230	54,340	12.44%	541,639	67,380
Total General Service		864,575	128,286		1,015,022	152,068
Tier 1 Police & Fire	21.37%	315,950	67,519	21.53%	317,438	68,344
Tier 2 Police & Fire	18.95%	570,675	108,143	19.00%	713,527	135,570
Total Police & Fire		886,625	175,662		1,030,965	203,914
Total		\$1,751,200	\$303,948		\$2,045,987	\$355,982
Employer normal cost rate						
General Service			14.84%			14.98%
Police & Fire			19.81%			19.78%
Aggregate (Default)			17.36%			17.40%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,002,344)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.64%)
B. Actual employer payroll	1,784,970
C. Payment to transition liability/(surplus)	(47,123)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.72%)
B. Actual employer payroll	1,723,336
C. Payment to transition liability/(surplus)	(46,876)
4. Supplemental payment to transition liability	0
5. Interest	(68,126)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$976,471)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(976,471)	(1,002,344)
2. Combined valuation payroll	3,587,215	3,662,947
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.86%)	(2.70%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,587,215	3,662,947
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

North Bend/Coos-Curry Housing Authority/2781
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
North Bend/Coos-Curry Housing Authority/2781

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
North Bend/Coos-Curry Housing Authority/2781

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

North Bend Coos-Curry Housing Authority -- #2781

September 2016

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Executive Summary

Milliman has prepared this report for North Bend/Coos-Curry Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIP),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIP. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to North Bend/Coos-Curry Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for North Bend/Coos-Curry Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	33.73%	33.73%	33.73%	33.73%	33.73%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	56.85%	56.85%	59.24%	47.32%	52.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	57.35%	57.35%	59.74%	47.75%	52.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Bend/Coos-Curry Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$678,963	\$854,327
Allocated pre-SLGRP pooled liability/(surplus)	(58,277)	(94,685)
Transition liability/(surplus)	1,136,508	1,134,959
Allocated pooled OPSRP UAL	50,399	60,487
Side account	0	0
Net unfunded pension actuarial accrued liability	1,807,593	1,955,088
Combined valuation payroll	354,515	529,093
Net pension UAL as a percentage of payroll	510%	370%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	33.73%	21.20%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,721	\$4,206
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$37,651	\$6,608	17.89%	\$89,282	\$15,973
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		37,651	6,608		89,282	15,973
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$37,651	\$6,608		\$89,282	\$15,973
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,134,959
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	14.67%
B. Actual employer payroll	225,230
C. Payment to transition liability/(surplus)	33,041
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	22.64%
B. Actual employer payroll	197,443
C. Payment to transition liability/(surplus)	44,701
4. Supplemental payment to transition liability	0
5. Interest	79,291
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,136,508

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,136,508	1,134,959
2. Combined valuation payroll	354,515	529,093
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	33.73%	21.20%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	354,515	529,093
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

North Central Public Health District/2884
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
North Central Public Health District/2884

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
North Central Public Health District/2884

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

North Central Public Health District -- #2884

September 2016

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Executive Summary

Milliman has prepared this report for North Central Public Health District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to North Central Public Health District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for North Central Public Health District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.77%	16.77%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.07%	24.07%	27.24%	15.32%	20.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.57%	24.57%	27.74%	15.75%	20.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Central Public Health District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,649,832	\$1,795,094
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	122,467	127,094
Side account	0	0
Net unfunded pension actuarial accrued liability	1,772,299	1,922,188
Combined valuation payroll	861,446	1,111,719
Net pension UAL as a percentage of payroll	206%	173%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,183	\$8,837
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$341,417	\$59,919	17.89%	\$325,249	\$58,187
Tier 2 General Service	12.26%	59,387	7,281	12.44%	57,534	7,157
Total General Service		400,804	67,200		382,783	65,344
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$400,804	\$67,200		\$382,783	\$65,344
Employer normal cost rate						
General Service			16.77%			17.07%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.77%			17.07%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	861,446	1,111,719
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	861,446	1,111,719
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

North Douglas County Fire and EMS/2638
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
North Douglas County Fire and EMS/2638

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
North Douglas County Fire and EMS/2638

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

North Douglas County Fire and EMS -- #2638

September 2016

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Executive Summary

Milliman has prepared this report for North Douglas County Fire and EMS to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to North Douglas County Fire and EMS.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for North Douglas County Fire and EMS

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.28%	14.81%	19.28%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(14.16%)	(14.16%)	(14.16%)	(14.16%)	(14.16%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.42%	7.95%	12.42%	1.16%	5.93%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.92%	8.45%	12.92%	1.59%	6.36%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Douglas County Fire and EMS

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$210,475	\$385,075
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(147,892)	(147,208)
Allocated pooled OPSRP UAL	15,624	27,264
Side account	0	0
Net unfunded pension actuarial accrued liability	78,207	265,131
Combined valuation payroll	109,898	238,481
Net pension UAL as a percentage of payroll	71%	111%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(14.16%)	(6.10%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$534	\$1,896
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	88	11
Total General Service		0	0		88	11
Tier 1 Police & Fire	21.37%	4,399	940	21.53%	11,030	2,375
Tier 2 Police & Fire	18.95%	27,621	5,234	19.00%	81,179	15,424
Total Police & Fire		32,020	6,174		92,209	17,799
Total		\$32,020	\$6,174		\$92,297	\$17,810
Employer normal cost rate						
General Service			14.81%			12.50%
Police & Fire			19.28%			19.30%
Aggregate (Default)			19.28%			19.30%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$147,208)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.94%)
B. Actual employer payroll	80,352
C. Payment to transition liability/(surplus)	(3,166)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.88%)
B. Actual employer payroll	110,015
C. Payment to transition liability/(surplus)	(6,468)
4. Supplemental payment to transition liability	0
5. Interest	(10,318)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$147,892)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(147,892)	(147,208)
2. Combined valuation payroll	109,898	238,481
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(14.16%)	(6.10%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	109,898	238,481
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

North Lincoln Fire & Rescue District #1/2793
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.



September 2016
North Lincoln Fire & Rescue District #1/2793

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
North Lincoln Fire & Rescue District #1/2793

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

North Lincoln Fire & Rescue District #1 -- #2793

September 2016

Secondary Employers

2711 Devils Lake Rural Fire Protection District

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Executive Summary

Milliman has prepared this report for North Lincoln Fire & Rescue District #1 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to North Lincoln Fire & Rescue District #1.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for North Lincoln Fire & Rescue District #1

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.74%	14.81%	19.74%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.60%)	(3.60%)	(3.60%)	(3.60%)	(3.60%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.44%	18.51%	23.44%	11.72%	16.49%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.94%	19.01%	23.94%	12.15%	16.92%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Lincoln Fire & Rescue District #1

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,164,516	\$947,200
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(208,230)	(219,313)
Allocated pooled OPSRP UAL	86,442	67,062
Side account	0	0
Net unfunded pension actuarial accrued liability	1,042,728	794,949
Combined valuation payroll	608,042	586,610
Net pension UAL as a percentage of payroll	171%	136%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.60%)	(3.70%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,952	\$4,663
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	119,586	25,556	21.53%	117,887	25,381
Tier 2 Police & Fire	18.95%	246,071	46,630	19.00%	239,020	45,414
Total Police & Fire		365,657	72,186		356,907	70,795
Total		\$365,657	\$72,186		\$356,907	\$70,795
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.74%			19.84%
Aggregate (Default)			19.74%			19.84%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$219,313)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.92%)
B. Actual employer payroll	279,044
C. Payment to transition liability/(surplus)	(13,729)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.95%)
B. Actual employer payroll	300,820
C. Payment to transition liability/(surplus)	(11,882)
4. Supplemental payment to transition liability	0
5. Interest	(14,528)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$208,230)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(208,230)	(219,313)
2. Combined valuation payroll	608,042	586,610
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.60%)	(3.70%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	608,042	586,610
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

North Morrow Vector Control District/2839
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
North Morrow Vector Control District/2839

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
North Morrow Vector Control District/2839

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

North Morrow Vector Control District -- #2839

September 2016

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Executive Summary

Milliman has prepared this report for North Morrow Vector Control District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to North Morrow Vector Control District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for North Morrow Vector Control District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.13%	0.13%	0.13%	0.13%	0.13%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.96%	17.96%	25.64%	13.72%	18.49%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.46%	18.46%	26.14%	14.15%	18.92%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

North Morrow Vector Control District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$230,351	\$187,866
Allocated pre-SLGRP pooled liability/(surplus)	(19,772)	(20,821)
Transition liability/(surplus)	1,446	1,501
Allocated pooled OPSRP UAL	17,099	13,301
Side account	0	0
Net unfunded pension actuarial accrued liability	229,124	181,847
Combined valuation payroll	120,276	116,347
Net pension UAL as a percentage of payroll	191%	156%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.13%	0.13%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$584	\$925
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	120,276	14,746	12.44%	116,347	14,474
Total General Service		120,276	14,746		116,347	14,474
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$120,276	\$14,746		\$116,347	\$14,474
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,501
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.14%
B. Actual employer payroll	56,806
C. Payment to transition liability/(surplus)	80
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.13%
B. Actual employer payroll	58,930
C. Payment to transition liability/(surplus)	76
4. Supplemental payment to transition liability	0
5. Interest	101
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,446

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,446	1,501
2. Combined valuation payroll	120,276	116,347
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.13%	0.13%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	120,276	116,347
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of North Plains/2192
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of North Plains/2192

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of North Plains/2192

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of North Plains -- #2192

September 2016

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Executive Summary

Milliman has prepared this report for City of North Plains to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of North Plains.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of North Plains

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	14.21%	12.26%	18.96%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.43%)	(2.43%)	(2.43%)	(2.43%)	(2.43%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.35%	15.40%	22.10%	11.16%	15.93%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.85%	15.90%	22.60%	11.59%	16.36%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of North Plains

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,287,421	\$1,235,322
Allocated pre-SLGRP pooled liability/(surplus)	(110,502)	(136,911)
Transition liability/(surplus)	(155,113)	(160,133)
Allocated pooled OPSRP UAL	95,565	87,462
Side account	0	0
Net unfunded pension actuarial accrued liability	1,117,371	1,025,740
Combined valuation payroll	672,216	765,047
Net pension UAL as a percentage of payroll	166%	134%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.43%)	(2.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,264	\$6,081
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	216,623	26,558	12.44%	205,580	25,574
Total General Service		216,623	26,558		205,580	25,574
Tier 1 Police & Fire	21.37%	508	109	21.53%	2,629	566
Tier 2 Police & Fire	18.95%	88,479	16,767	19.00%	84,898	16,131
Total Police & Fire		88,987	16,876		87,527	16,697
Total		\$305,610	\$43,434		\$293,107	\$42,271
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			18.96%			19.08%
Aggregate (Default)			14.21%			14.42%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$160,133)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.70%)
B. Actual employer payroll	341,184
C. Payment to transition liability/(surplus)	(9,212)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.10%)
B. Actual employer payroll	315,701
C. Payment to transition liability/(surplus)	(6,630)
4. Supplemental payment to transition liability	0
5. Interest	(10,822)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$155,113)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(155,113)	(160,133)
2. Combined valuation payroll	672,216	765,047
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.43%)	(2.07%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	672,216	765,047
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of North Powder/2308
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of North Powder/2308

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of North Powder/2308

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of North Powder -- #2308

September 2016

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Executive Summary

Milliman has prepared this report for City of North Powder to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of North Powder.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of North Powder

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.28%)	(3.28%)	(3.28%)	(3.28%)	(3.28%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.28%	16.28%	23.96%	12.04%	16.81%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.78%	16.78%	24.46%	12.47%	17.24%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of North Powder

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$123,262	\$101,379
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(20,035)	(20,875)
Allocated pooled OPSRP UAL	9,150	7,178
Side account	0	0
Net unfunded pension actuarial accrued liability	112,377	87,682
Combined valuation payroll	64,360	62,785
Net pension UAL as a percentage of payroll	175%	140%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.28%)	(3.29%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$313	\$499
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	32,872	4,030	12.44%	32,033	3,985
Total General Service		32,872	4,030		32,033	3,985
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$32,872	\$4,030		\$32,033	\$3,985
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$20,875)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.96%)
B. Actual employer payroll	29,984
C. Payment to transition liability/(surplus)	(1,187)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.37%)
B. Actual employer payroll	31,160
C. Payment to transition liability/(surplus)	(1,051)
4. Supplemental payment to transition liability	0
5. Interest	(1,398)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$20,035)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(20,035)	(20,875)
2. Combined valuation payroll	64,360	62,785
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.28%)	(3.29%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	64,360	62,785
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Northern Oregon Corrections/2825
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Northern Oregon Corrections/2825

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Northern Oregon Corrections/2825

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Northern Oregon Corrections -- #2825

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Northern Oregon Corrections to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Northern Oregon Corrections.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Northern Oregon Corrections

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.08%	13.70%	19.23%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.31%)	(9.31%)	(9.31%)	(9.31%)	(9.31%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	14.07%	11.69%	17.22%	6.01%	10.78%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.57%	12.19%	17.72%	6.44%	11.21%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Northern Oregon Corrections

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$6,043,373	\$5,684,435
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,791,002)	(2,915,356)
Allocated pooled OPSRP UAL	448,598	402,461
Side account	0	0
Net unfunded pension actuarial accrued liability	3,700,969	3,171,540
Combined valuation payroll	3,155,496	3,520,426
Net pension UAL as a percentage of payroll	117%	90%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.31%)	(8.18%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$15,322	\$27,982
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$198,533	\$34,843	17.89%	\$199,763	\$35,738
Tier 2 General Service	12.26%	530,277	65,012	12.44%	584,014	72,651
Total General Service		728,810	99,855		783,777	108,389
Tier 1 Police & Fire	21.37%	63,884	13,652	21.53%	136,479	29,384
Tier 2 Police & Fire	18.95%	486,679	92,226	19.00%	464,884	88,328
Total Police & Fire		550,563	105,878		601,363	117,712
Total		\$1,279,373	\$205,733		\$1,385,140	\$226,101
Employer normal cost rate						
General Service			13.70%			13.83%
Police & Fire			19.23%			19.57%
Aggregate (Default)			16.08%			16.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,915,356)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.48%)
B. Actual employer payroll	1,689,552
C. Payment to transition liability/(surplus)	(177,065)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.51%)
B. Actual employer payroll	1,668,742
C. Payment to transition liability/(surplus)	(142,010)
4. Supplemental payment to transition liability	0
5. Interest	(194,721)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,791,002)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,791,002)	(2,915,356)
2. Combined valuation payroll	3,155,496	3,520,426
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.31%)	(8.18%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,155,496	3,520,426
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Nyssa/2166
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Nyssa/2166

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Nyssa/2166

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Nyssa -- #2166

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Nyssa to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Nyssa.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Nyssa

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.85%	15.35%	20.62%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.50%)	(0.50%)	(0.50%)	(0.50%)	(0.50%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.92%	20.42%	25.69%	13.09%	17.86%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.42%	20.92%	26.19%	13.52%	18.29%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Nyssa

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,496,355	\$1,147,792
Allocated pre-SLGRP pooled liability/(surplus)	(128,436)	(127,210)
Transition liability/(surplus)	(37,365)	(38,559)
Allocated pooled OPSRP UAL	111,074	81,264
Side account	0	0
Net unfunded pension actuarial accrued liability	1,441,628	1,063,287
Combined valuation payroll	781,309	710,839
Net pension UAL as a percentage of payroll	185%	150%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.50%)	(0.54%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,794	\$5,650
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$117,707	\$20,658	17.89%	\$114,812	\$20,540
Tier 2 General Service	12.26%	84,107	10,312	12.44%	84,167	10,470
Total General Service		201,814	30,970		198,979	31,010
Tier 1 Police & Fire	21.37%	125,469	26,813	21.53%	124,095	26,718
Tier 2 Police & Fire	18.95%	56,792	10,762	19.00%	56,907	10,812
Total Police & Fire		182,261	37,575		181,002	37,530
Total		\$384,075	\$68,545		\$379,981	\$68,540
Employer normal cost rate						
General Service			15.35%			15.58%
Police & Fire			20.62%			20.73%
Aggregate (Default)			17.85%			18.04%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$38,559)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.53%)
B. Actual employer payroll	366,018
C. Payment to transition liability/(surplus)	(1,940)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.50%)
B. Actual employer payroll	372,086
C. Payment to transition liability/(surplus)	(1,861)
4. Supplemental payment to transition liability	0
5. Interest	(2,607)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$37,365)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(37,365)	(38,559)
2. Combined valuation payroll	781,309	710,839
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.50%)	(0.54%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	781,309	710,839
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Oakland/2143
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Oakland/2143

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Oakland/2143

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Oakland -- #2143

September 2016

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Executive Summary

Milliman has prepared this report for City of Oakland to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Oakland.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Oakland

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	6.11%	6.11%	6.11%	6.11%	6.11%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.67%	25.67%	33.35%	21.43%	26.20%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	26.17%	26.17%	33.85%	21.86%	26.63%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Oakland

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$384,587	\$288,602
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	116,541	120,030
Allocated pooled OPSRP UAL	28,548	20,433
Side account	0	0
Net unfunded pension actuarial accrued liability	529,676	429,065
Combined valuation payroll	200,809	178,734
Net pension UAL as a percentage of payroll	264%	240%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	6.11%	6.64%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$975	\$1,421
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	43,582	5,343	12.44%	24,610	3,061
Total General Service		43,582	5,343		24,610	3,061
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$43,582	\$5,343		\$24,610	\$3,061
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$120,030
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	5.06%
B. Actual employer payroll	94,337
C. Payment to transition liability/(surplus)	4,773
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	7.09%
B. Actual employer payroll	96,566
C. Payment to transition liability/(surplus)	6,847
4. Supplemental payment to transition liability	0
5. Interest	8,131
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$116,541

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	116,541	120,030
2. Combined valuation payroll	200,809	178,734
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	6.11%	6.64%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	200,809	178,734
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Oakridge/2168
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Oakridge/2168

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Oakridge/2168

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Oakridge -- #2168

September 2016

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Executive Summary

Milliman has prepared this report for City of Oakridge to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Oakridge.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Oakridge

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.06%	14.13%	20.72%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	5.50%	5.50%	5.50%	5.50%	5.50%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	29.13%	25.20%	31.79%	19.09%	23.86%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	29.63%	25.70%	32.29%	19.52%	24.29%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Oakridge

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,182,381	\$1,741,980
Allocated pre-SLGRP pooled liability/(surplus)	(187,319)	(193,064)
Transition liability/(surplus)	595,642	608,336
Allocated pooled OPSRP UAL	161,998	123,333
Side account	0	0
Net unfunded pension actuarial accrued liability	2,752,702	2,280,585
Combined valuation payroll	1,139,512	1,078,825
Net pension UAL as a percentage of payroll	242%	211%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	5.50%	5.57%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,533	\$8,575
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$58,425	\$10,254	17.89%	\$58,171	\$10,407
Tier 2 General Service	12.26%	106,780	13,091	12.44%	102,209	12,715
Total General Service		165,205	23,345		160,380	23,122
Tier 1 Police & Fire	21.37%	178,964	38,245	21.53%	239,449	51,553
Tier 2 Police & Fire	18.95%	65,400	12,393	19.00%	121,684	23,120
Total Police & Fire		244,364	50,638		361,133	74,673
Total		\$409,569	\$73,983		\$521,513	\$97,795
Employer normal cost rate						
General Service			14.13%			14.42%
Police & Fire			20.72%			20.68%
Aggregate (Default)			18.06%			18.75%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$608,336
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	4.08%
B. Actual employer payroll	510,195
C. Payment to transition liability/(surplus)	20,816
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	5.77%
B. Actual employer payroll	579,451
C. Payment to transition liability/(surplus)	33,434
4. Supplemental payment to transition liability	0
5. Interest	41,556
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$595,642

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	595,642	608,336
2. Combined valuation payroll	1,139,512	1,078,825
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	5.50%	5.57%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,139,512	1,078,825
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Oak Lodge Water District/2504
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Oak Lodge Water District/2504

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Oak Lodge Water District/2504

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Oak Lodge Water District -- #2504

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Oak Lodge Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Oak Lodge Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Oak Lodge Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.26%	15.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	2.19%	2.19%	2.19%	2.19%	2.19%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.75%	24.75%	29.43%	17.51%	22.28%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.25%	25.25%	29.93%	17.94%	22.71%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oak Lodge Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,769,943	\$1,539,315
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	192,409	196,631
Allocated pooled OPSRP UAL	131,382	108,984
Side account	0	0
Net unfunded pension actuarial accrued liability	2,093,734	1,844,930
Combined valuation payroll	924,161	953,313
Net pension UAL as a percentage of payroll	227%	194%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	2.19%	2.04%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,487	\$7,577
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$369,815	\$64,903	17.89%	\$465,426	\$83,265
Tier 2 General Service	12.26%	281,457	34,507	12.44%	300,238	37,350
Total General Service		651,272	99,410		765,664	120,615
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$651,272	\$99,410		\$765,664	\$120,615
Employer normal cost rate						
General Service			15.26%			15.75%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.26%			15.75%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$196,631
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.02%
B. Actual employer payroll	413,515
C. Payment to transition liability/(surplus)	8,353
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.05%
B. Actual employer payroll	453,294
C. Payment to transition liability/(surplus)	9,293
4. Supplemental payment to transition liability	0
5. Interest	13,424
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$192,409

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	192,409	196,631
2. Combined valuation payroll	924,161	953,313
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.19%	2.04%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	924,161	953,313
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Ochoco Irrigation District/2852
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Ochoco Irrigation District/2852

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Ochoco Irrigation District/2852

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Ochoco Irrigation District -- #2852

September 2016

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Executive Summary

Milliman has prepared this report for Ochoco Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Ochoco Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Ochoco Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.10%)	(5.10%)	(5.10%)	(5.10%)	(5.10%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.73%	12.73%	20.41%	8.49%	13.26%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.23%	13.23%	20.91%	8.92%	13.69%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Ochoco Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$947,258	\$662,962
Allocated pre-SLGRP pooled liability/(surplus)	(81,305)	(73,476)
Transition liability/(surplus)	(239,521)	(249,241)
Allocated pooled OPSRP UAL	70,315	46,938
Side account	0	0
Net unfunded pension actuarial accrued liability	696,747	387,183
Combined valuation payroll	494,603	410,579
Net pension UAL as a percentage of payroll	141%	94%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.10%)	(6.00%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,402	\$3,264
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	341,343	41,849	12.44%	320,927	39,923
Total General Service		341,343	41,849		320,927	39,923
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$341,343	\$41,849		\$320,927	\$39,923
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$249,241)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.47%)
B. Actual employer payroll	216,354
C. Payment to transition liability/(surplus)	(11,835)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.10%)
B. Actual employer payroll	239,292
C. Payment to transition liability/(surplus)	(14,596)
4. Supplemental payment to transition liability	0
5. Interest	(16,711)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$239,521)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(239,521)	(249,241)
2. Combined valuation payroll	494,603	410,579
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.10%)	(6.00%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	494,603	410,579
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Odell Rural Fire Protection District/2562
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Odell Rural Fire Protection District/2562

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Odell Rural Fire Protection District/2562

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Odell Rural Fire Protection District -- #2562

September 2016

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Executive Summary

Milliman has prepared this report for Odell Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Odell Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Odell Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	4.67%	4.67%	4.67%	4.67%	4.67%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	29.19%	25.05%	29.19%	18.26%	23.03%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	29.69%	25.55%	29.69%	18.69%	23.46%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Odell Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$77,148	\$61,698
Allocated pre-SLGRP pooled liability/(surplus)	(6,622)	(6,838)
Transition liability/(surplus)	17,893	19,052
Allocated pooled OPSRP UAL	5,727	4,368
Side account	0	0
Net unfunded pension actuarial accrued liability	94,146	78,280
Combined valuation payroll	40,282	38,210
Net pension UAL as a percentage of payroll	234%	205%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	4.67%	4.93%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$196	\$304
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	40,282	7,633	19.00%	38,210	7,260
Total Police & Fire		40,282	7,633		38,210	7,260
Total		\$40,282	\$7,633		\$38,210	\$7,260
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$19,052
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.51%
B. Actual employer payroll	56,350
C. Payment to transition liability/(surplus)	1,414
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.72%
B. Actual employer payroll	57,700
C. Payment to transition liability/(surplus)	993
4. Supplemental payment to transition liability	0
5. Interest	1,248
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$17,893

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	17,893	19,052
2. Combined valuation payroll	40,282	38,210
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	4.67%	4.93%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	40,282	38,210
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Odell Sanitary District/2816
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Odell Sanitary District/2816

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Odell Sanitary District/2816

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Odell Sanitary District -- #2816

September 2016

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Executive Summary

Milliman has prepared this report for Odell Sanitary District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Odell Sanitary District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Odell Sanitary District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(0.79%)	(0.79%)	(0.79%)	(0.79%)	(0.79%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.77%	18.77%	26.45%	14.53%	19.30%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.27%	19.27%	26.95%	14.96%	19.73%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Odell Sanitary District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$455,129	\$272,875
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(17,955)	(18,935)
Allocated pooled OPSRP UAL	33,784	19,320
Side account	0	0
Net unfunded pension actuarial accrued liability	470,958	273,260
Combined valuation payroll	237,642	168,994
Net pension UAL as a percentage of payroll	198%	162%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(0.79%)	(1.11%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,154	\$1,343
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	46,403	5,689	12.44%	43,364	5,394
Total General Service		46,403	5,689		43,364	5,394
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$46,403	\$5,689		\$43,364	\$5,394
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$18,935)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.59%)
B. Actual employer payroll	81,191
C. Payment to transition liability/(surplus)	(1,291)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.82%)
B. Actual employer payroll	114,810
C. Payment to transition liability/(surplus)	(942)
4. Supplemental payment to transition liability	0
5. Interest	(1,253)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$17,955)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(17,955)	(18,935)
2. Combined valuation payroll	237,642	168,994
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.79%)	(1.11%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	237,642	168,994
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Oregon City/2119
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Oregon City/2119

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Oregon City/2119

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Oregon City -- #2119

September 2016

Secondary Employers

2727	Park Place Water District
2769	South Fork Water Board

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Executive Summary

Milliman has prepared this report for City of Oregon City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Oregon City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Oregon City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.46%	13.75%	19.44%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(5.08%)	(5.08%)	(5.08%)	(5.08%)	(5.08%)
Net pension contribution rate	17.68%	15.97%	21.66%	10.24%	15.01%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.18%	16.47%	22.16%	10.67%	15.44%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Oregon City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$24,291,097	\$19,255,764
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,803,121	1,363,319
Side account	6,123,589	6,554,926
Net unfunded pension actuarial accrued liability	19,970,629	14,064,157
Combined valuation payroll	12,683,391	11,925,282
Net pension UAL as a percentage of payroll	157%	118%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	(5.08%)	(5.43%)
Allocated pooled RHIA UAL	\$61,586	\$94,789
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,322,854	\$232,161	17.89%	\$1,582,522	\$283,113
Tier 2 General Service	12.26%	3,371,881	413,393	12.44%	3,127,241	389,029
Total General Service		4,694,735	645,554		4,709,763	672,142
Tier 1 Police & Fire	21.37%	411,431	87,923	21.53%	292,982	63,079
Tier 2 Police & Fire	18.95%	1,611,706	305,418	19.00%	1,478,633	280,940
Total Police & Fire		2,023,137	393,341		1,771,615	344,019
Total		\$6,717,872	\$1,038,895		\$6,481,378	\$1,016,161
Employer normal cost rate						
General Service			13.75%			14.27%
Police & Fire			19.44%			19.42%
Aggregate (Default)			15.46%			15.68%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	12,683,391	11,925,282
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$6,554,926	\$6,554,926
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(569,244)	(569,244)
5. Side account earnings during 2015		138,907	138,907
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$6,123,589	\$6,123,589

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$6,123,589	\$6,554,926
Side Account 2	0	0
Side Account 3	0	0
Total	\$6,123,589	\$6,554,926

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$6,123,589	\$6,554,926
2. Combined valuation payroll	12,683,391	11,925,282
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(5.08%)	(5.43%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Oregon Coast Community College/2995
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Oregon Coast Community College/2995

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Oregon Coast Community College/2995

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Oregon Coast Community College -- #2995

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Oregon Coast Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Oregon Coast Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Oregon Coast Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(10.84%)	(10.84%)	(10.84%)	(10.84%)	(10.84%)
Net pension contribution rate	12.75%	12.75%	18.16%	6.24%	11.01%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.25%	13.25%	18.66%	6.67%	11.44%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon Coast Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,513,614	\$3,391,324
Allocated pre-SLGRP pooled liability/(surplus)	307,013	378,960
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	260,815	240,108
Side account	1,889,201	1,970,957
Net unfunded pension actuarial accrued liability	2,192,241	2,039,435
Combined valuation payroll	1,834,604	2,100,280
Net pension UAL as a percentage of payroll	119%	97%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(10.84%)	(9.27%)
Allocated pooled RHIA UAL	\$8,908	\$16,694
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$1,970,957	\$1,970,957
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(122,294)	(122,294)
5. Side account earnings during 2015		41,538	41,538
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$1,889,201	\$1,889,201

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$1,889,201	\$1,970,957
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,889,201	\$1,970,957

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$1,889,201	\$1,970,957
2. Combined valuation payroll	1,834,604	2,100,280
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(10.84%)	(9.27%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Oregon Health & Science University/2880
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Oregon Health & Science University/2880

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Oregon Health & Science University/2880

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Oregon Health & Science University -- #2880

September 2016

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Executive Summary

Milliman has prepared this report for Oregon Health & Science University to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Oregon Health & Science University.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Oregon Health & Science University

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.14%	15.13%	19.67%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(7.10%)	(7.10%)	(7.10%)	(7.10%)	(7.10%)
Side account rate relief ²	(0.36%)	(0.36%)	(0.36%)	(0.36%)	(0.36%)
Net pension contribution rate	14.98%	14.97%	19.51%	7.86%	12.63%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.48%	15.47%	20.01%	8.29%	13.06%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon Health & Science University

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$642,055,964	\$562,759,723
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(226,284,710)	(229,666,390)
Allocated pooled OPSRP UAL	47,659,623	39,843,719
Side account	14,781,832	7,902,264
Net unfunded pension actuarial accrued liability	448,649,045	365,034,788
Combined valuation payroll	335,244,097	348,522,581
Net pension UAL as a percentage of payroll	134%	105%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(7.10%)	(6.51%)
Side account rate relief	(0.36%)	(0.18%)
Allocated pooled RHIA UAL	\$1,627,830	\$2,770,262
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$108,024,491	\$18,958,298	17.89%	\$117,282,747	\$20,981,883
Tier 2 General Service	12.26%	91,145,657	11,174,458	12.44%	95,472,041	11,876,722
Total General Service		199,170,148	30,132,756		212,754,788	32,858,605
Tier 1 Police & Fire	21.37%	106,897	22,844	21.53%	194,028	41,774
Tier 2 Police & Fire	18.95%	252,509	47,850	19.00%	170,422	32,380
Total Police & Fire		359,406	70,694		364,450	74,154
Total		\$199,529,554	\$30,203,450		\$213,119,238	\$32,932,759
Employer normal cost rate						
General Service			15.13%			15.44%
Police & Fire			19.67%			20.35%
Aggregate (Default)			15.14%			15.45%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$229,666,390)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.08%)
B. Actual employer payroll	173,611,048
C. Payment to transition liability/(surplus)	(8,819,441)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.96%)
B. Actual employer payroll	173,650,077
C. Payment to transition liability/(surplus)	(10,349,544)
4. Supplemental payment to transition liability	0
5. Interest	(15,787,305)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$226,284,710)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(226,284,710)	(229,666,390)
2. Combined valuation payroll	335,244,097	348,522,581
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.10%)	(6.51%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$7,902,264	\$7,902,264
2. Deposits during 2015	7,500,000	N/A	7,500,000
3. Administrative expenses	(2,500)	(1,000)	(3,500)
4. Amount transferred to employer reserves during 2015	(389,314)	(572,791)	(962,105)
5. Side account earnings during 2015	180,877	164,296	345,173
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)	\$7,289,063	\$7,492,769	\$14,781,832

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$7,492,769	\$7,902,264
Side Account 2	7,289,063	0
Side Account 3	0	0
Total	\$14,781,832	\$7,902,264

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$14,781,832	\$7,902,264
2. Combined valuation payroll	335,244,097	348,522,581
3. Average amortization factor	12.315	12.353
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(0.36%)	(0.18%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Oregon School Boards Association/2531
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Oregon School Boards Association/2531

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Oregon School Boards Association/2531

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Oregon School Boards Association -- #2531

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Oregon School Boards Association to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Oregon School Boards Association.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Oregon School Boards Association

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.63%	15.63%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.10%	0.10%	0.10%	0.10%	0.10%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.03%	23.03%	27.34%	15.42%	20.19%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.53%	23.53%	27.84%	15.85%	20.62%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon School Boards Association

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,597,141	\$4,383,982
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	27,538	28,501
Allocated pooled OPSRP UAL	415,474	310,389
Side account	0	0
Net unfunded pension actuarial accrued liability	6,040,153	4,722,872
Combined valuation payroll	2,922,500	2,715,043
Net pension UAL as a percentage of payroll	207%	174%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.10%	0.10%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$14,191	\$21,581
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,000,497	\$175,587	17.89%	\$1,029,960	\$184,260
Tier 2 General Service	12.26%	568,479	69,696	12.44%	402,534	50,075
Total General Service		1,568,976	245,283		1,432,494	234,335
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$1,568,976	\$245,283		\$1,432,494	\$234,335
Employer normal cost rate						
General Service			15.63%			16.36%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.63%			16.36%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$28,501
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.10%
B. Actual employer payroll	1,271,383
C. Payment to transition liability/(surplus)	1,271
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.11%
B. Actual employer payroll	1,466,724
C. Payment to transition liability/(surplus)	1,613
4. Supplemental payment to transition liability	0
5. Interest	1,921
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$27,538

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	27,538	28,501
2. Combined valuation payroll	2,922,500	2,715,043
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.10%	0.10%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,922,500	2,715,043
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Oregon Trail Library District/2774
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Oregon Trail Library District/2774

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Oregon Trail Library District/2774

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Oregon Trail Library District -- #2774

September 2016

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Executive Summary

Milliman has prepared this report for Oregon Trail Library District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Oregon Trail Library District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Oregon Trail Library District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.08%)	(1.08%)	(1.08%)	(1.08%)	(1.08%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.27%	19.30%	24.43%	12.51%	17.28%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.77%	19.80%	24.93%	12.94%	17.71%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Oregon Trail Library District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$212,709	\$184,483
Allocated pre-SLGRP pooled liability/(surplus)	(18,257)	(20,446)
Transition liability/(surplus)	(11,450)	(11,919)
Allocated pooled OPSRP UAL	15,789	13,061
Side account	0	0
Net unfunded pension actuarial accrued liability	198,791	165,179
Combined valuation payroll	111,064	114,252
Net pension UAL as a percentage of payroll	179%	145%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.08%)	(1.03%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$539	\$908
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$46,270	\$8,278
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		46,270	8,278
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$46,270	\$8,278
Employer normal cost rate						
General Service			14.81%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$11,919)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.14%)
B. Actual employer payroll	61,368
C. Payment to transition liability/(surplus)	(700)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.08%)
B. Actual employer payroll	52,629
C. Payment to transition liability/(surplus)	(568)
4. Supplemental payment to transition liability	0
5. Interest	(799)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$11,450)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(11,450)	(11,919)
2. Combined valuation payroll	111,064	114,252
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.08%)	(1.03%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	111,064	114,252
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Parkdale Fire District/2684
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Parkdale Fire District/2684

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Parkdale Fire District/2684

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Parkdale Fire District -- #2684

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Parkdale Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Parkdale Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Parkdale Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.53%	0.53%	0.53%	0.53%	0.53%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	26.78%	22.64%	26.78%	15.85%	20.62%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	27.28%	23.14%	27.28%	16.28%	21.05%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Parkdale Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$219,695	\$173,152
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	5,787	6,098
Allocated pooled OPSRP UAL	16,308	12,259
Side account	0	0
Net unfunded pension actuarial accrued liability	241,790	191,509
Combined valuation payroll	114,712	107,235
Net pension UAL as a percentage of payroll	211%	179%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.53%	0.56%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$557	\$852
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	74,006	14,024	19.00%	68,114	12,942
Total Police & Fire		74,006	14,024		68,114	12,942
Total		\$74,006	\$14,024		\$68,114	\$12,942
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$6,098
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.73%
B. Actual employer payroll	53,129
C. Payment to transition liability/(surplus)	388
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.59%
B. Actual employer payroll	55,472
C. Payment to transition liability/(surplus)	327
4. Supplemental payment to transition liability	0
5. Interest	404
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$5,787

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	5,787	6,098
2. Combined valuation payroll	114,712	107,235
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.53%	0.56%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	114,712	107,235
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Pendleton/2154
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Pendleton/2154

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Pendleton/2154

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Pendleton -- #2154

September 2016

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Executive Summary

Milliman has prepared this report for City of Pendleton to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Pendleton.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Pendleton

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.74%	15.25%	19.79%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(3.93%)	(3.93%)	(3.93%)	(3.93%)	(3.93%)
Net pension contribution rate	19.38%	16.89%	21.43%	9.66%	14.43%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.88%	17.39%	21.93%	10.09%	14.86%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Pendleton

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$16,991,994	\$13,094,603
Allocated pre-SLGRP pooled liability/(surplus)	(1,458,462)	(1,451,279)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,261,311	927,106
Side account	3,313,409	3,527,901
Net unfunded pension actuarial accrued liability	13,481,434	9,042,529
Combined valuation payroll	8,872,226	8,109,615
Net pension UAL as a percentage of payroll	152%	112%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	(3.93%)	(4.30%)
Allocated pooled RHIA UAL	\$43,080	\$64,460
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,159,214	\$203,442	17.89%	\$1,312,024	\$234,721
Tier 2 General Service	12.26%	892,656	109,440	12.44%	844,976	105,115
Total General Service		2,051,870	312,882		2,157,000	339,836
Tier 1 Police & Fire	21.37%	866,503	185,172	21.53%	930,419	200,319
Tier 2 Police & Fire	18.95%	1,615,886	306,210	19.00%	1,482,551	281,685
Total Police & Fire		2,482,389	491,382		2,412,970	482,004
Total		\$4,534,259	\$804,264		\$4,569,970	\$821,840
Employer normal cost rate						
General Service			15.25%			15.76%
Police & Fire			19.79%			19.98%
Aggregate (Default)			17.74%			17.98%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	8,872,226	8,109,615
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$3,527,901	\$3,527,901
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(288,219)	(288,219)
5. Side account earnings during 2015		74,727	74,727
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$3,313,409	\$3,313,409

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$3,313,409	\$3,527,901
Side Account 2	0	0
Side Account 3	0	0
Total	\$3,313,409	\$3,527,901

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$3,313,409	\$3,527,901
2. Combined valuation payroll	8,872,226	8,109,615
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(3.93%)	(4.30%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Philomath/2187
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Philomath/2187

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Philomath/2187

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Philomath -- #2187

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Philomath to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Philomath.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Philomath

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.84%	14.96%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.96%)	(2.96%)	(2.96%)	(2.96%)	(2.96%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.45%	17.57%	23.98%	10.63%	15.40%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.95%	18.07%	24.48%	11.06%	15.83%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Philomath

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,989,888	\$2,405,719
Allocated pre-SLGRP pooled liability/(surplus)	(256,629)	(266,627)
Transition liability/(surplus)	(439,257)	(454,104)
Allocated pooled OPSRP UAL	221,939	170,326
Side account	0	0
Net unfunded pension actuarial accrued liability	2,515,941	1,855,314
Combined valuation payroll	1,561,145	1,489,885
Net pension UAL as a percentage of payroll	161%	125%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.96%)	(3.01%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$7,580	\$11,842
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$199,861	\$35,076	17.89%	\$195,104	\$34,904
Tier 2 General Service	12.26%	191,102	23,429	12.44%	245,009	30,479
Total General Service		390,963	58,505		440,113	65,383
Tier 1 Police & Fire	21.37%	162,361	34,697	21.53%	234,745	50,541
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		162,361	34,697		234,745	50,541
Total		\$553,324	\$93,202		\$674,858	\$115,924
Employer normal cost rate						
General Service			14.96%			14.86%
Police & Fire			21.37%			21.53%
Aggregate (Default)			16.84%			17.18%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$454,104)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.75%)
B. Actual employer payroll	725,985
C. Payment to transition liability/(surplus)	(19,965)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.35%)
B. Actual employer payroll	762,018
C. Payment to transition liability/(surplus)	(25,528)
4. Supplemental payment to transition liability	0
5. Interest	(30,646)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$439,257)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(439,257)	(454,104)
2. Combined valuation payroll	1,561,145	1,489,885
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.96%)	(3.01%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,561,145	1,489,885
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Philomath Fire Department/2694
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Philomath Fire Department/2694

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Philomath Fire Department/2694

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Philomath Fire Department -- #2694

September 2016

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Executive Summary

Milliman has prepared this report for Philomath Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Philomath Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Philomath Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(3.82%)	(3.82%)	(3.82%)	(3.82%)	(3.82%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.70%	16.56%	20.70%	9.77%	14.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.20%	17.06%	21.20%	10.20%	14.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Philomath Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$291,383	\$596,621
Allocated pre-SLGRP pooled liability/(surplus)	(25,010)	(66,124)
Transition liability/(surplus)	(55,186)	(56,338)
Allocated pooled OPSRP UAL	21,629	42,241
Side account	0	0
Net unfunded pension actuarial accrued liability	232,816	516,400
Combined valuation payroll	152,143	369,493
Net pension UAL as a percentage of payroll	153%	140%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(3.82%)	(1.51%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$739	\$2,937
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	90,762	19,541
Tier 2 Police & Fire	18.95%	68,961	13,068	19.00%	67,957	12,912
Total Police & Fire		68,961	13,068		158,719	32,453
Total		\$68,961	\$13,068		\$158,719	\$32,453
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			20.45%
Aggregate (Default)			18.95%			20.45%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$56,338)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.59%)
B. Actual employer payroll	200,148
C. Payment to transition liability/(surplus)	(3,182)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.54%)
B. Actual employer payroll	118,112
C. Payment to transition liability/(surplus)	(1,820)
4. Supplemental payment to transition liability	0
5. Interest	(3,850)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$55,186)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(55,186)	(56,338)
2. Combined valuation payroll	152,143	369,493
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.82%)	(1.51%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	152,143	369,493
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Phoenix/2249

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Phoenix/2249

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Phoenix/2249

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Phoenix -- #2249

September 2016

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Executive Summary

Milliman has prepared this report for City of Phoenix to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Phoenix.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Phoenix

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.42%	12.26%	20.06%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.52%)	(10.52%)	(10.52%)	(10.52%)	(10.52%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.20%	9.04%	16.84%	4.80%	9.57%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.70%	9.54%	17.34%	5.23%	10.00%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Phoenix

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,240,990	\$1,890,658
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,170,042)	(1,208,705)
Allocated pooled OPSRP UAL	166,348	133,860
Side account	0	0
Net unfunded pension actuarial accrued liability	1,237,296	815,813
Combined valuation payroll	1,170,114	1,170,903
Net pension UAL as a percentage of payroll	106%	70%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.52%)	(10.20%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,682	\$9,307
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	199,024	24,400	12.44%	209,067	26,008
Total General Service		199,024	24,400		209,067	26,008
Tier 1 Police & Fire	21.37%	62,320	13,318	21.53%	62,916	13,546
Tier 2 Police & Fire	18.95%	72,947	13,823	19.00%	139,680	26,539
Total Police & Fire		135,267	27,141		202,596	40,085
Total		\$334,291	\$51,541		\$411,663	\$66,093
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			20.06%			19.79%
Aggregate (Default)			15.42%			16.06%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,208,705)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.11%)
B. Actual employer payroll	584,178
C. Payment to transition liability/(surplus)	(59,060)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(11.40%)
B. Actual employer payroll	537,145
C. Payment to transition liability/(surplus)	(61,234)
4. Supplemental payment to transition liability	0
5. Interest	(81,631)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,170,042)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,170,042)	(1,208,705)
2. Combined valuation payroll	1,170,114	1,170,903
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.52%)	(10.20%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,170,114	1,170,903
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Pilot Rock/2161
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Pilot Rock/2161

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Pilot Rock/2161

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Pilot Rock -- #2161

September 2016

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Executive Summary

Milliman has prepared this report for City of Pilot Rock to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Pilot Rock.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Pilot Rock

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.73%	15.73%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	4.24%	4.24%	4.24%	4.24%	4.24%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.54%	25.54%	29.75%	17.83%	22.60%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	26.04%	26.04%	30.25%	18.26%	23.03%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Pilot Rock

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$634,096	\$482,190
Allocated pre-SLGRP pooled liability/(surplus)	(54,426)	(53,441)
Transition liability/(surplus)	133,473	135,320
Allocated pooled OPSRP UAL	47,069	34,139
Side account	0	0
Net unfunded pension actuarial accrued liability	760,212	598,208
Combined valuation payroll	331,088	298,625
Net pension UAL as a percentage of payroll	230%	200%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	4.24%	4.48%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,608	\$2,374
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$83,133	\$14,590	17.89%	\$80,575	\$14,415
Tier 2 General Service	12.26%	43,436	5,325	12.44%	44,382	5,521
Total General Service		126,569	19,915		124,957	19,936
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	66,320	12,601
Total Police & Fire		0	0		66,320	12,601
Total		\$126,569	\$19,915		\$191,277	\$32,537
Employer normal cost rate						
General Service			15.73%			15.95%
Police & Fire			19.94%			19.00%
Aggregate (Default)			15.73%			17.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$135,320
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.96%
B. Actual employer payroll	139,532
C. Payment to transition liability/(surplus)	5,525
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.81%
B. Actual employer payroll	147,859
C. Payment to transition liability/(surplus)	5,634
4. Supplemental payment to transition liability	0
5. Interest	9,312
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$133,473

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	133,473	135,320
2. Combined valuation payroll	331,088	298,625
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	4.24%	4.48%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	331,088	298,625
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Pleasant Hill Fire Department/2650
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Pleasant Hill Fire Department/2650

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Pleasant Hill Fire Department/2650

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Pleasant Hill Fire Department -- #2650

September 2016

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Executive Summary

Milliman has prepared this report for Pleasant Hill Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Pleasant Hill Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Pleasant Hill Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.51%)	(2.51%)	(2.51%)	(2.51%)	(2.51%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.84%	17.87%	23.00%	11.08%	15.85%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.34%	18.37%	23.50%	11.51%	16.28%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Pleasant Hill Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$109,463	\$86,873
Allocated pre-SLGRP pooled liability/(surplus)	(9,395)	(9,628)
Transition liability/(surplus)	(13,616)	(14,047)
Allocated pooled OPSRP UAL	8,125	6,151
Side account	0	0
Net unfunded pension actuarial accrued liability	94,577	69,349
Combined valuation payroll	57,155	53,801
Net pension UAL as a percentage of payroll	165%	129%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.51%)	(2.58%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$278	\$428
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$14,047)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.16%)
B. Actual employer payroll	27,000
C. Payment to transition liability/(surplus)	(583)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.95%)
B. Actual employer payroll	27,042
C. Payment to transition liability/(surplus)	(798)
4. Supplemental payment to transition liability	0
5. Interest	(950)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$13,616)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(13,616)	(14,047)
2. Combined valuation payroll	57,155	53,801
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.51%)	(2.58%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	57,155	53,801
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of Coos Bay/2513
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of Coos Bay/2513

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of Coos Bay/2513

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of Coos Bay -- #2513

September 2016

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Executive Summary

Milliman has prepared this report for Port of Coos Bay to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of Coos Bay.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of Coos Bay

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.12%	15.12%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.75%)	(1.75%)	(1.75%)	(1.75%)	(1.75%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.67%	20.67%	25.49%	13.57%	18.34%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.17%	21.17%	25.99%	14.00%	18.77%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Coos Bay

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,477,684	\$1,927,848
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(215,443)	(222,656)
Allocated pooled OPSRP UAL	183,918	136,493
Side account	0	0
Net unfunded pension actuarial accrued liability	2,446,159	1,841,685
Combined valuation payroll	1,293,702	1,193,935
Net pension UAL as a percentage of payroll	189%	154%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.75%)	(1.84%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,282	\$9,490
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$102,865	\$18,053	17.89%	\$203,921	\$36,481
Tier 2 General Service	12.26%	87,720	10,754	12.44%	79,991	9,951
Total General Service		190,585	28,807		283,912	46,432
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$190,585	\$28,807		\$283,912	\$46,432
Employer normal cost rate						
General Service			15.12%			16.35%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.12%			16.35%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$222,656)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.73%)
B. Actual employer payroll	641,918
C. Payment to transition liability/(surplus)	(11,105)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.73%)
B. Actual employer payroll	643,871
C. Payment to transition liability/(surplus)	(11,139)
4. Supplemental payment to transition liability	0
5. Interest	(15,031)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$215,443)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(215,443)	(222,656)
2. Combined valuation payroll	1,293,702	1,193,935
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.75%)	(1.84%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,293,702	1,193,935
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of Garibaldi/2741

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of Garibaldi/2741

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of Garibaldi/2741

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of Garibaldi -- #2741

September 2016

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Executive Summary

Milliman has prepared this report for Port of Garibaldi to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of Garibaldi.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of Garibaldi

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.72%	14.72%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.53%)	(2.53%)	(2.53%)	(2.53%)	(2.53%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.76%	17.76%	22.98%	11.06%	15.83%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.26%	18.26%	23.48%	11.49%	16.26%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Garibaldi

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$612,001	\$311,447
Allocated pre-SLGRP pooled liability/(surplus)	(52,529)	(34,518)
Transition liability/(surplus)	(76,741)	(78,404)
Allocated pooled OPSRP UAL	45,429	22,051
Side account	0	0
Net unfunded pension actuarial accrued liability	528,160	220,576
Combined valuation payroll	319,551	192,882
Net pension UAL as a percentage of payroll	165%	114%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.53%)	(4.02%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,552	\$1,533
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$47,431	\$8,324	17.89%	\$44,680	\$7,993
Tier 2 General Service	12.26%	54,396	6,669	12.44%	49,959	6,215
Total General Service		101,827	14,993		94,639	14,208
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$101,827	\$14,993		\$94,639	\$14,208
Employer normal cost rate						
General Service			14.72%			15.01%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.72%			15.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$78,404)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.33%)
B. Actual employer payroll	134,542
C. Payment to transition liability/(surplus)	(3,135)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.54%)
B. Actual employer payroll	152,812
C. Payment to transition liability/(surplus)	(3,882)
4. Supplemental payment to transition liability	0
5. Interest	(5,354)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$76,741)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(76,741)	(78,404)
2. Combined valuation payroll	319,551	192,882
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.53%)	(4.02%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	319,551	192,882
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of Newport/2625
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of Newport/2625

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of Newport/2625

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of Newport -- #2625

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Port of Newport to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of Newport.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of Newport

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.88%	16.88%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(11.14%)	(11.14%)	(11.14%)	(11.14%)	(11.14%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.04%	13.04%	16.10%	4.18%	8.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.54%	13.54%	16.60%	4.61%	9.38%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Newport

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,346,903	\$1,014,528
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(744,310)	(765,533)
Allocated pooled OPSRP UAL	99,980	71,829
Side account	0	0
Net unfunded pension actuarial accrued liability	702,573	320,824
Combined valuation payroll	703,274	628,307
Net pension UAL as a percentage of payroll	100%	51%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(11.14%)	(12.04%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,415	\$4,994
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$180,283	\$31,640	17.89%	\$178,804	\$31,988
Tier 2 General Service	12.26%	25,959	3,183	12.44%	26,151	3,253
Total General Service		206,242	34,823		204,955	35,241
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$206,242	\$34,823		\$204,955	\$35,241
Employer normal cost rate						
General Service			16.88%			17.19%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.88%			17.19%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$765,533)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.18%)
B. Actual employer payroll	301,244
C. Payment to transition liability/(surplus)	(27,654)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(13.35%)
B. Actual employer payroll	358,318
C. Payment to transition liability/(surplus)	(45,498)
4. Supplemental payment to transition liability	0
5. Interest	(51,929)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$744,310)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(744,310)	(765,533)
2. Combined valuation payroll	703,274	628,307
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(11.14%)	(12.04%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	703,274	628,307
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of Portland/2512

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of Portland/2512

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of Portland/2512

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of Portland -- #2512

September 2016

Secondary Employers

2151 Portland Dock Commission

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Executive Summary

Milliman has prepared this report for Port of Portland to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of Portland.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of Portland

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.50%	14.49%	19.82%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.13%)	(0.13%)	(0.13%)	(0.13%)	(0.13%)
Side account rate relief ²	(5.10%)	(5.10%)	(5.10%)	(5.10%)	(5.10%)
Net pension contribution rate	15.84%	14.83%	20.16%	8.36%	13.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.34%	15.33%	20.66%	8.79%	13.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Portland

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$126,777,001	\$109,397,539
Allocated pre-SLGRP pooled liability/(surplus)	(10,881,560)	(12,124,567)
Transition liability/(surplus)	(824,465)	(857,515)
Allocated pooled OPSRP UAL	9,410,619	7,745,410
Side account	32,065,256	34,663,317
Net unfunded pension actuarial accrued liability	92,416,339	69,497,550
Combined valuation payroll	66,195,540	67,750,962
Net pension UAL as a percentage of payroll	140%	103%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.13%)	(0.13%)
Side account rate relief	(5.10%)	(5.06%)
Allocated pooled RHIA UAL	\$321,423	\$538,524
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$11,746,850	\$2,061,572	17.89%	\$12,837,286	\$2,296,590
Tier 2 General Service	12.26%	16,114,038	1,975,581	12.44%	17,203,539	2,140,120
Total General Service		27,860,888	4,037,153		30,040,825	4,436,710
Tier 1 Police & Fire	21.37%	2,339,009	499,846	21.53%	2,750,610	592,206
Tier 2 Police & Fire	18.95%	4,142,074	784,923	19.00%	3,970,566	754,408
Total Police & Fire		6,481,083	1,284,769		6,721,176	1,346,614
Total		\$34,341,971	\$5,321,922		\$36,762,001	\$5,783,324
Employer normal cost rate						
General Service			14.49%			14.77%
Police & Fire			19.82%			20.04%
Aggregate (Default)			15.50%			15.73%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$857,515)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.13%)
B. Actual employer payroll	31,892,887
C. Payment to transition liability/(surplus)	(41,461)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.14%)
B. Actual employer payroll	35,079,021
C. Payment to transition liability/(surplus)	(49,110)
4. Supplemental payment to transition liability	0
5. Interest	(57,521)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$824,465)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(824,465)	(857,515)
2. Combined valuation payroll	66,195,540	67,750,962
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.13%)	(0.13%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$34,663,317	\$34,663,317
2. Deposits during 2015		N/A	
3. Administrative expenses		(2,000)	(2,000)
4. Amount transferred to employer reserves during 2015		(3,315,381)	(3,315,381)
5. Side account earnings during 2015		719,319	719,319
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$32,065,256	\$32,065,256

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$16,276,067	\$17,594,803
Side Account 2	15,789,189	17,068,514
Side Account 3	0	0
Total	\$32,065,256	\$34,663,317

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$32,065,256	\$34,663,317
2. Combined valuation payroll	66,195,540	67,750,962
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(5.10%)	(5.06%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of The Dalles/2501

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of The Dalles/2501

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of The Dalles/2501

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of The Dalles -- #2501

September 2016

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Executive Summary

Milliman has prepared this report for Port of The Dalles to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of The Dalles.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of The Dalles

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.43%	13.43%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(11.22%)	(11.22%)	(11.22%)	(11.22%)	(11.22%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	7.78%	7.78%	14.29%	2.37%	7.14%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	8.28%	8.28%	14.79%	2.80%	7.57%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of The Dalles

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$420,451	\$281,383
Allocated pre-SLGRP pooled liability/(surplus)	(36,088)	(31,186)
Transition liability/(surplus)	(234,052)	(241,785)
Allocated pooled OPSRP UAL	31,210	19,922
Side account	0	0
Net unfunded pension actuarial accrued liability	181,521	28,334
Combined valuation payroll	219,535	174,263
Net pension UAL as a percentage of payroll	83%	16%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(11.22%)	(13.71%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,066	\$1,385
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$29,651	\$5,204	17.89%	\$32,258	\$5,771
Tier 2 General Service	12.26%	104,210	12,776	12.44%	104,280	12,972
Total General Service		133,861	17,980		136,538	18,743
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$133,861	\$17,980		\$136,538	\$18,743
Employer normal cost rate						
General Service			13.43%			13.73%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.43%			13.73%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$241,785)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(13.54%)
B. Actual employer payroll	96,576
C. Payment to transition liability/(surplus)	(12,133)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(11.88%)
B. Actual employer payroll	104,665
C. Payment to transition liability/(surplus)	(11,929)
4. Supplemental payment to transition liability	0
5. Interest	(16,329)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$234,052)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(234,052)	(241,785)
2. Combined valuation payroll	219,535	174,263
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(11.22%)	(13.71%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	219,535	174,263
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port of Tillamook Bay/2713
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port of Tillamook Bay/2713

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port of Tillamook Bay/2713

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port of Tillamook Bay -- #2713

September 2016

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Executive Summary

Milliman has prepared this report for Port of Tillamook Bay to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port of Tillamook Bay.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port of Tillamook Bay

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.04%	14.04%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.96%)	(1.96%)	(1.96%)	(1.96%)	(1.96%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.65%	17.65%	23.55%	11.63%	16.40%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.15%	18.15%	24.05%	12.06%	16.83%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port of Tillamook Bay

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,613,591	\$1,139,611
Allocated pre-SLGRP pooled liability/(surplus)	(138,498)	(126,303)
Transition liability/(surplus)	(156,593)	(162,914)
Allocated pooled OPSRP UAL	119,776	80,685
Side account	0	0
Net unfunded pension actuarial accrued liability	1,438,276	931,079
Combined valuation payroll	842,523	705,772
Net pension UAL as a percentage of payroll	171%	132%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.96%)	(2.28%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,091	\$5,610
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$67,420	\$11,832	17.89%	\$66,329	\$11,866
Tier 2 General Service	12.26%	132,592	16,256	12.44%	187,672	23,346
Total General Service		200,012	28,088		254,001	35,212
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$200,012	\$28,088		\$254,001	\$35,212
Employer normal cost rate						
General Service			14.04%			13.86%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.04%			13.86%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$162,914)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.92%)
B. Actual employer payroll	348,747
C. Payment to transition liability/(surplus)	(6,696)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.54%)
B. Actual employer payroll	415,334
C. Payment to transition liability/(surplus)	(10,550)
4. Supplemental payment to transition liability	0
5. Interest	(10,925)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$156,593)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(156,593)	(162,914)
2. Combined valuation payroll	842,523	705,772
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.96%)	(2.28%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	842,523	705,772
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Port Orford/2184
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Port Orford/2184

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Port Orford/2184

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Port Orford -- #2184

September 2016

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Executive Summary

Milliman has prepared this report for City of Port Orford to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Port Orford.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Port Orford

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.79%	14.08%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.85%)	(0.85%)	(0.85%)	(0.85%)	(0.85%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.51%	18.80%	26.09%	12.74%	17.51%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.01%	19.30%	26.59%	13.17%	17.94%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Port Orford

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$977,511	\$705,116
Allocated pre-SLGRP pooled liability/(surplus)	(83,902)	(78,148)
Transition liability/(surplus)	(41,349)	(43,114)
Allocated pooled OPSRP UAL	72,560	49,923
Side account	0	0
Net unfunded pension actuarial accrued liability	924,820	633,777
Combined valuation payroll	510,399	436,685
Net pension UAL as a percentage of payroll	181%	145%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.85%)	(0.98%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,478	\$3,471
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$55,492	\$9,739	17.89%	\$54,962	\$9,833
Tier 2 General Service	12.26%	106,183	13,018	12.44%	100,966	12,560
Total General Service		161,675	22,757		155,928	22,393
Tier 1 Police & Fire	21.37%	49,511	10,581	21.53%	4,071	876
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		49,511	10,581		4,071	876
Total		\$211,186	\$33,338		\$159,999	\$23,269
Employer normal cost rate						
General Service			14.08%			14.36%
Police & Fire			21.37%			21.52%
Aggregate (Default)			15.79%			14.54%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$43,114)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.91%)
B. Actual employer payroll	247,731
C. Payment to transition liability/(surplus)	(2,254)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.94%)
B. Actual employer payroll	254,859
C. Payment to transition liability/(surplus)	(2,396)
4. Supplemental payment to transition liability	0
5. Interest	(2,885)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$41,349)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(41,349)	(43,114)
2. Combined valuation payroll	510,399	436,685
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.85%)	(0.98%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	510,399	436,685
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Port Orford Library/2673
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Port Orford Library/2673

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Port Orford Library/2673

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Port Orford Library -- #2673

September 2016

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Executive Summary

Milliman has prepared this report for Port Orford Library to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Port Orford Library.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Port Orford Library

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(14.52%)	(14.52%)	(14.52%)	(14.52%)	(14.52%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	3.31%	3.31%	10.99%	0.00%	3.84%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	3.81%	3.81%	11.49%	0.43%	4.27%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Port Orford Library

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$53,024	\$11,597
Allocated pre-SLGRP pooled liability/(surplus)	(4,551)	(1,285)
Transition liability/(surplus)	(38,197)	(39,390)
Allocated pooled OPSRP UAL	3,936	821
Side account	0	0
Net unfunded pension actuarial accrued liability	14,212	(28,257)
Combined valuation payroll	27,686	7,182
Net pension UAL as a percentage of payroll	51%	(393%)
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(14.52%)	(54.21%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$134	\$57
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	19,637	2,407	12.44%	0	0
Total General Service		19,637	2,407		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$19,637	\$2,407		\$0	\$0
Employer normal cost rate						
General Service			12.26%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$39,390)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(12.95%)
B. Actual employer payroll	7,205
C. Payment to transition liability/(surplus)	(845)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(16.96%)
B. Actual employer payroll	19,180
C. Payment to transition liability/(surplus)	(3,013)
4. Supplemental payment to transition liability	0
5. Interest	(2,665)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$38,197)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(38,197)	(39,390)
2. Combined valuation payroll	27,686	7,182
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(14.52%)	(54.21%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	27,686	7,182
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Portland/2121

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Portland/2121

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Portland/2121

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Portland -- #2121

September 2016

Secondary Employers

2156	Portland Development Commission
2173	Portland Boxing Commission
2509	Multnomah Rural Fire Protection District #2
2520	Powell Valley Road Water District
2525	Metropolitan Planning Commission
2566	Capitol Highway Water District
2680	Gilbert Water District
2683	City of Portland Water Bureau

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Executive Summary

Milliman has prepared this report for City of Portland to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Portland.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Portland

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.88%	14.81%	19.30%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	7.15%	7.15%	7.15%	7.15%	7.15%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(4.45%)	(4.45%)	(4.45%)	(4.45%)	(4.45%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.12%	17.05%	21.54%	10.26%	15.03%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.62%	17.55%	22.04%	10.69%	15.46%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Portland

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$670,620,667	\$541,108,595
Allocated pre-SLGRP pooled liability/(surplus)	(57,560,903)	(59,971,251)
Transition liability/(surplus)	(147,978,097)	(153,483,273)
Allocated pooled OPSRP UAL	49,779,972	38,310,806
Side account	0	0
Net unfunded pension actuarial accrued liability	514,861,639	365,964,877
Combined valuation payroll	350,158,915	335,113,826
Net pension UAL as a percentage of payroll	147%	109%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(4.45%)	(4.53%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,700,252	\$2,663,682
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$73,619,662	\$12,920,251	17.89%	\$80,608,263	\$14,420,818
Tier 2 General Service	12.26%	79,211,840	9,711,372	12.44%	80,787,640	10,049,982
Total General Service		152,831,502	22,631,623		161,395,903	24,470,800
Tier 1 Police & Fire	21.37%	350,017	74,799	21.53%	517,176	111,348
Tier 2 Police & Fire	18.95%	2,038,511	386,298	19.00%	1,787,708	339,665
Total Police & Fire		2,388,528	461,097		2,304,884	451,013
Total		\$155,220,030	\$23,092,720		\$163,700,787	\$24,921,813
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.30%			19.57%
Aggregate (Default)			14.88%			15.22%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$153,483,273)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.59%)
B. Actual employer payroll	165,327,388
C. Payment to transition liability/(surplus)	(7,588,527)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.69%)
B. Actual employer payroll	175,707,935
C. Payment to transition liability/(surplus)	(8,240,702)
4. Supplemental payment to transition liability	0
5. Interest	(10,324,053)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$147,978,097)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(147,978,097)	(153,483,273)
2. Combined valuation payroll	350,158,915	335,113,826
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.45%)	(4.53%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	350,158,915	335,113,826
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Portland Community College/2918
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Portland Community College/2918

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Portland Community College/2918

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Portland Community College -- #2918

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Portland Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Portland Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Portland Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(9.10%)	(9.10%)	(9.10%)	(9.10%)	(9.10%)
Net pension contribution rate	14.49%	14.49%	19.90%	7.98%	12.75%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.99%	14.99%	20.40%	8.41%	13.18%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Portland Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$244,477,688	\$207,087,759
Allocated pre-SLGRP pooled liability/(surplus)	21,362,006	23,140,780
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	18,147,506	14,661,935
Side account	110,417,812	118,918,159
Net unfunded pension actuarial accrued liability	173,569,388	125,972,315
Combined valuation payroll	127,651,959	128,251,467
Net pension UAL as a percentage of payroll	136%	98%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(9.10%)	(9.16%)
Allocated pooled RHIA UAL	\$619,834	\$1,019,418
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$118,918,159	\$118,918,159
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(10,976,294)	(10,976,294)
5. Side account earnings during 2015		2,476,948	2,476,948
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$110,417,812	\$110,417,812

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$110,417,812	\$118,918,159
Side Account 2	0	0
Side Account 3	0	0
Total	\$110,417,812	\$118,918,159

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$110,417,812	\$118,918,159
2. Combined valuation payroll	127,651,959	128,251,467
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(9.10%)	(9.16%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Portland Housing Authority/2519
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Portland Housing Authority/2519

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Portland Housing Authority/2519

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Portland Housing Authority -- #2519

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Portland Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Portland Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Portland Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.02%	14.02%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.81%)	(4.81%)	(4.81%)	(4.81%)	(4.81%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.51%	16.51%	22.43%	10.51%	15.28%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.01%	17.01%	22.93%	10.94%	15.71%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Portland Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$28,776,323	\$23,618,417
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(6,867,312)	(7,079,318)
Allocated pooled OPSRP UAL	2,136,058	1,672,198
Side account	0	0
Net unfunded pension actuarial accrued liability	24,045,069	18,211,297
Combined valuation payroll	15,025,314	14,627,116
Net pension UAL as a percentage of payroll	160%	125%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.81%)	(4.78%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$72,958	\$116,265
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,177,088	\$382,079	17.89%	\$2,554,821	\$457,057
Tier 2 General Service	12.26%	4,350,697	533,395	12.44%	4,500,178	559,822
Total General Service		6,527,785	915,474		7,054,999	1,016,879
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$6,527,785	\$915,474		\$7,054,999	\$1,016,879
Employer normal cost rate						
General Service			14.02%			14.41%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.02%			14.41%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$7,079,318)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.46%)
B. Actual employer payroll	7,007,018
C. Payment to transition liability/(surplus)	(312,513)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.02%)
B. Actual employer payroll	7,542,004
C. Payment to transition liability/(surplus)	(378,608)
4. Supplemental payment to transition liability	0
5. Interest	(479,115)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$6,867,312)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(6,867,312)	(7,079,318)
2. Combined valuation payroll	15,025,314	14,627,116
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.81%)	(4.78%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	15,025,314	14,627,116
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rainbow Water District/2542
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rainbow Water District/2542

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rainbow Water District/2542

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rainbow Water District -- #2542

September 2016

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Executive Summary

Milliman has prepared this report for Rainbow Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rainbow Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rainbow Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	2.09%	2.09%	2.09%	2.09%	2.09%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.21%	25.21%	27.60%	15.68%	20.45%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.71%	25.71%	28.10%	16.11%	20.88%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rainbow Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$951,516	\$756,334
Allocated pre-SLGRP pooled liability/(surplus)	(81,671)	(83,825)
Transition liability/(surplus)	98,674	101,565
Allocated pooled OPSRP UAL	70,631	53,549
Side account	0	0
Net unfunded pension actuarial accrued liability	1,039,150	827,623
Combined valuation payroll	496,826	468,405
Net pension UAL as a percentage of payroll	209%	177%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	2.09%	2.14%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,412	\$3,723
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$226,997	\$39,838	17.89%	\$218,431	\$39,077
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		226,997	39,838		218,431	39,077
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$226,997	\$39,838		\$218,431	\$39,077
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$101,565
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.11%
B. Actual employer payroll	226,320
C. Payment to transition liability/(surplus)	4,775
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.00%
B. Actual employer payroll	249,970
C. Payment to transition liability/(surplus)	5,000
4. Supplemental payment to transition liability	0
5. Interest	6,884
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$98,674

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	98,674	101,565
2. Combined valuation payroll	496,826	468,405
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.09%	2.14%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	496,826	468,405
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rainier Cemetery District/2776
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rainier Cemetery District/2776

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rainier Cemetery District/2776

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rainier Cemetery District -- #2776

September 2016

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Executive Summary

Milliman has prepared this report for Rainier Cemetery District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rainier Cemetery District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rainier Cemetery District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(20.72%)	(20.72%)	(20.72%)	(20.72%)	(20.72%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	2.36%	1.39%	6.52%	0.00%	0.00%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	2.86%	1.89%	7.02%	0.43%	0.43%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rainier Cemetery District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$85,724	\$69,122
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(88,130)	(88,770)
Allocated pooled OPSRP UAL	6,363	4,894
Side account	0	0
Net unfunded pension actuarial accrued liability	3,957	(14,754)
Combined valuation payroll	44,760	42,808
Net pension UAL as a percentage of payroll	9%	(34%)
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(20.72%)	(20.49%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$217	\$340
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$88,770)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(15.26%)
B. Actual employer payroll	30,106
C. Payment to transition liability/(surplus)	(3,727)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(11.63%)
B. Actual employer payroll	26,331
C. Payment to transition liability/(surplus)	(3,062)
4. Supplemental payment to transition liability	0
5. Interest	(6,149)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$88,130)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(88,130)	(88,770)
2. Combined valuation payroll	44,760	42,808
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(20.72%)	(20.49%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	44,760	42,808
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Redmond/2122
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Redmond/2122

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Redmond/2122

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Redmond -- #2122

September 2016

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Executive Summary

Milliman has prepared this report for City of Redmond to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Redmond.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Redmond

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.03%	14.12%	19.63%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.37%)	(5.37%)	(5.37%)	(5.37%)	(5.37%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.96%	16.05%	21.56%	9.95%	14.72%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.46%	16.55%	22.06%	10.38%	15.15%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Redmond

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$19,904,781	\$15,532,223
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(5,299,818)	(5,501,139)
Allocated pooled OPSRP UAL	1,477,526	1,099,691
Side account	0	0
Net unfunded pension actuarial accrued liability	16,082,489	11,130,775
Combined valuation payroll	10,393,113	9,619,257
Net pension UAL as a percentage of payroll	155%	116%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.37%)	(5.65%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$50,465	\$76,460
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$971,924	\$170,573	17.89%	\$961,143	\$171,948
Tier 2 General Service	12.26%	1,797,283	220,347	12.44%	1,744,031	216,957
Total General Service		2,769,207	390,920		2,705,174	388,905
Tier 1 Police & Fire	21.37%	413,926	88,456	21.53%	393,040	84,622
Tier 2 Police & Fire	18.95%	1,062,594	201,362	19.00%	1,032,705	196,214
Total Police & Fire		1,476,520	289,818		1,425,745	280,836
Total		\$4,245,727	\$680,738		\$4,130,919	\$669,741
Employer normal cost rate						
General Service			14.12%			14.38%
Police & Fire			19.63%			19.70%
Aggregate (Default)			16.03%			16.21%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$5,501,139)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.70%)
B. Actual employer payroll	4,790,672
C. Payment to transition liability/(surplus)	(273,068)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.85%)
B. Actual employer payroll	5,094,134
C. Payment to transition liability/(surplus)	(298,008)
4. Supplemental payment to transition liability	0
5. Interest	(369,755)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$5,299,818)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(5,299,818)	(5,501,139)
2. Combined valuation payroll	10,393,113	9,619,257
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.37%)	(5.65%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	10,393,113	9,619,257
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Redmond Fire & Rescue/2590
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Redmond Fire & Rescue/2590

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Redmond Fire & Rescue/2590

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Redmond Fire & Rescue -- #2590

September 2016

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Executive Summary

Milliman has prepared this report for Redmond Fire & Rescue to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Redmond Fire & Rescue.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Redmond Fire & Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.71%	14.81%	19.71%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.05%)	(5.05%)	(5.05%)	(5.05%)	(5.05%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.96%	17.06%	21.96%	10.27%	15.04%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.46%	17.56%	22.46%	10.70%	15.47%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Redmond Fire & Rescue

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$8,416,758	\$6,886,407
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,107,892)	(2,192,058)
Allocated pooled OPSRP UAL	624,773	487,562
Side account	0	0
Net unfunded pension actuarial accrued liability	6,933,639	5,181,911
Combined valuation payroll	4,394,739	4,264,819
Net pension UAL as a percentage of payroll	158%	122%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.05%)	(5.08%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$21,339	\$33,899
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	901,895	192,735	21.53%	973,091	209,506
Tier 2 Police & Fire	18.95%	1,962,774	371,946	19.00%	1,887,360	358,598
Total Police & Fire		2,864,669	564,681		2,860,451	568,104
Total		\$2,864,669	\$564,681		\$2,860,451	\$568,104
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.71%			19.86%
Aggregate (Default)			19.71%			19.86%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,192,058)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.70%)
B. Actual employer payroll	2,086,672
C. Payment to transition liability/(surplus)	(118,940)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.23%)
B. Actual employer payroll	2,146,984
C. Payment to transition liability/(surplus)	(112,288)
4. Supplemental payment to transition liability	0
5. Interest	(147,062)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,107,892)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,107,892)	(2,192,058)
2. Combined valuation payroll	4,394,739	4,264,819
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.05%)	(5.08%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,394,739	4,264,819
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Reedsport/2139
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Reedsport/2139

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Reedsport/2139

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Reedsport -- #2139

September 2016

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Executive Summary

Milliman has prepared this report for City of Reedsport to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Reedsport.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Reedsport

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.88%	13.88%	19.63%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(12.24%)	(12.24%)	(12.24%)	(12.24%)	(12.24%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.21%	7.21%	12.96%	1.35%	6.12%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	9.71%	7.71%	13.46%	1.78%	6.55%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Reedsport

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,775,726	\$2,340,507
Allocated pre-SLGRP pooled liability/(surplus)	(238,247)	(259,399)
Transition liability/(surplus)	(1,686,598)	(1,714,836)
Allocated pooled OPSRP UAL	206,041	165,709
Side account	0	0
Net unfunded pension actuarial accrued liability	1,056,922	531,981
Combined valuation payroll	1,449,322	1,449,499
Net pension UAL as a percentage of payroll	73%	37%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(12.24%)	(11.69%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$7,037	\$11,521
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$129,487	\$22,725	17.89%	\$129,054	\$23,088
Tier 2 General Service	12.26%	293,577	35,993	12.44%	325,367	40,476
Total General Service		423,064	58,718		454,421	63,564
Tier 1 Police & Fire	21.37%	63,382	13,545	21.53%	124,250	26,751
Tier 2 Police & Fire	18.95%	161,542	30,612	19.00%	195,692	37,181
Total Police & Fire		224,924	44,157		319,942	63,932
Total		\$647,988	\$102,875		\$774,363	\$127,496
Employer normal cost rate						
General Service			13.88%			13.99%
Police & Fire			19.63%			19.98%
Aggregate (Default)			15.88%			16.46%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,714,836)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.59%)
B. Actual employer payroll	665,861
C. Payment to transition liability/(surplus)	(70,515)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(11.77%)
B. Actual employer payroll	670,299
C. Payment to transition liability/(surplus)	(75,393)
4. Supplemental payment to transition liability	0
5. Interest	(117,670)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,686,598)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,686,598)	(1,714,836)
2. Combined valuation payroll	1,449,322	1,449,499
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(12.24%)	(11.69%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,449,322	1,449,499
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Riddle/2260

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Riddle/2260

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Riddle/2260

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Riddle -- #2260

September 2016

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Executive Summary

Milliman has prepared this report for City of Riddle to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Riddle.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Riddle

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.10%	16.10%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.79%)	(3.79%)	(3.79%)	(3.79%)	(3.79%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.61%	19.61%	23.45%	11.53%	16.30%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.11%	20.11%	23.95%	11.96%	16.73%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Riddle

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$590,355	\$403,045
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(111,060)	(115,558)
Allocated pooled OPSRP UAL	43,822	28,536
Side account	0	0
Net unfunded pension actuarial accrued liability	523,117	316,023
Combined valuation payroll	308,249	249,610
Net pension UAL as a percentage of payroll	170%	127%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.79%)	(4.58%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,497	\$1,984
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$117,997	\$20,708	17.89%	\$114,143	\$20,420
Tier 2 General Service	12.26%	44,444	5,449	12.44%	42,606	5,300
Total General Service		162,441	26,157		156,749	25,720
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$162,441	\$26,157		\$156,749	\$25,720
Employer normal cost rate						
General Service			16.10%			16.41%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.10%			16.41%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$115,558)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.27%)
B. Actual employer payroll	133,593
C. Payment to transition liability/(surplus)	(5,704)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.26%)
B. Actual employer payroll	153,563
C. Payment to transition liability/(surplus)	(6,542)
4. Supplemental payment to transition liability	0
5. Interest	(7,748)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$111,060)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(111,060)	(115,558)
2. Combined valuation payroll	308,249	249,610
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.79%)	(4.58%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	308,249	249,610
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Rockaway Beach/2203
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Rockaway Beach/2203

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Rockaway Beach/2203

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Rockaway Beach -- #2203

September 2016

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Executive Summary

Milliman has prepared this report for City of Rockaway Beach to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Rockaway Beach.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Rockaway Beach

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.29%	13.29%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.77%)	(3.77%)	(3.77%)	(3.77%)	(3.77%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.82%	16.82%	23.47%	11.55%	16.32%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.32%	17.32%	23.97%	11.98%	16.75%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Rockaway Beach

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,664,849	\$1,120,091
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(311,357)	(323,219)
Allocated pooled OPSRP UAL	123,581	79,303
Side account	0	0
Net unfunded pension actuarial accrued liability	1,477,073	876,175
Combined valuation payroll	869,287	693,683
Net pension UAL as a percentage of payroll	170%	126%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.77%)	(4.61%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,221	\$5,514
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$46,257	\$8,118	17.89%	\$43,594	\$7,799
Tier 2 General Service	12.26%	190,920	23,407	12.44%	219,786	27,341
Total General Service		237,177	31,525		263,380	35,140
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$237,177	\$31,525		\$263,380	\$35,140
Employer normal cost rate						
General Service			13.29%			13.34%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.29%			13.34%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$323,219)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.38%)
B. Actual employer payroll	366,568
C. Payment to transition liability/(surplus)	(16,056)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.27%)
B. Actual employer payroll	410,520
C. Payment to transition liability/(surplus)	(17,529)
4. Supplemental payment to transition liability	0
5. Interest	(21,723)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$311,357)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(311,357)	(323,219)
2. Combined valuation payroll	869,287	693,683
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.77%)	(4.61%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	869,287	693,683
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rogue Community College/2922
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rogue Community College/2922

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rogue Community College/2922

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rogue Community College -- #2922

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Rogue Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rogue Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rogue Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(8.85%)	(8.85%)	(8.85%)	(8.85%)	(8.85%)
Net pension contribution rate	14.74%	14.74%	20.15%	8.23%	13.00%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.24%	15.24%	20.65%	8.66%	13.43%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rogue Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$38,351,776	\$31,333,355
Allocated pre-SLGRP pooled liability/(surplus)	3,351,107	3,501,309
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	2,846,841	2,218,420
Side account	16,838,323	18,083,620
Net unfunded pension actuarial accrued liability	27,711,401	18,969,464
Combined valuation payroll	20,025,056	19,405,052
Net pension UAL as a percentage of payroll	138%	98%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(8.85%)	(9.21%)
Allocated pooled RHIA UAL	\$97,235	\$154,243
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$18,083,620	\$18,083,620
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,620,984)	(1,620,984)
5. Side account earnings during 2015		376,687	376,687
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$16,838,323	\$16,838,323

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$16,838,323	\$18,083,620
Side Account 2	0	0
Side Account 3	0	0
Total	\$16,838,323	\$18,083,620

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$16,838,323	\$18,083,620
2. Combined valuation payroll	20,025,056	19,405,052
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(8.85%)	(9.21%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Rogue River/2251
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Rogue River/2251

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Rogue River/2251

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Rogue River -- #2251

September 2016

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Executive Summary

Milliman has prepared this report for City of Rogue River to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Rogue River.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Rogue River

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	16.07%	15.33%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	3.95%	3.95%	3.95%	3.95%	3.95%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.59%	24.85%	28.47%	17.54%	22.31%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	26.09%	25.35%	28.97%	17.97%	22.74%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Rogue River

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,248,788	\$942,406
Allocated pre-SLGRP pooled liability/(surplus)	(107,186)	(104,447)
Transition liability/(surplus)	244,973	251,410
Allocated pooled OPSRP UAL	92,697	66,723
Side account	0	0
Net unfunded pension actuarial accrued liability	1,479,272	1,156,092
Combined valuation payroll	652,044	583,641
Net pension UAL as a percentage of payroll	227%	198%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	3.95%	4.26%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,166	\$4,639
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$131,395	\$23,060	17.89%	\$127,641	\$22,835
Tier 2 General Service	12.26%	94,865	11,630	12.44%	91,388	11,369
Total General Service		226,260	34,690		219,029	34,204
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	58,176	11,024	19.00%	61,462	11,678
Total Police & Fire		58,176	11,024		61,462	11,678
Total		\$284,436	\$45,714		\$280,491	\$45,882
Employer normal cost rate						
General Service			15.33%			15.62%
Police & Fire			18.95%			19.00%
Aggregate (Default)			16.07%			16.36%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$251,410
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.32%
B. Actual employer payroll	338,318
C. Payment to transition liability/(surplus)	11,232
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.54%
B. Actual employer payroll	347,345
C. Payment to transition liability/(surplus)	12,296
4. Supplemental payment to transition liability	0
5. Interest	17,091
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$244,973

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	244,973	251,410
2. Combined valuation payroll	652,044	583,641
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	3.95%	4.26%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	652,044	583,641
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rogue River Fire District/2549
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rogue River Fire District/2549

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rogue River Fire District/2549

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rogue River Fire District -- #2549

September 2016

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Executive Summary

Milliman has prepared this report for Rogue River Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rogue River Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rogue River Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.21%	15.13%	19.83%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.02%)	(5.02%)	(5.02%)	(5.02%)	(5.02%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.76%	15.68%	20.38%	8.57%	13.34%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.26%	16.18%	20.88%	9.00%	13.77%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rogue River Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,910,093	\$1,406,529
Allocated pre-SLGRP pooled liability/(surplus)	(163,948)	(155,886)
Transition liability/(surplus)	(475,417)	(488,000)
Allocated pooled OPSRP UAL	141,786	99,583
Side account	0	0
Net unfunded pension actuarial accrued liability	1,412,514	862,226
Combined valuation payroll	997,339	871,077
Net pension UAL as a percentage of payroll	142%	99%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.02%)	(5.54%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,843	\$6,924
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$52,881	\$9,281	17.89%	\$51,034	\$9,130
Tier 2 General Service	12.26%	44,770	5,489	12.44%	43,276	5,384
Total General Service		97,651	14,770		94,310	14,514
Tier 1 Police & Fire	21.37%	234,242	50,058	21.53%	235,949	50,800
Tier 2 Police & Fire	18.95%	409,964	77,688	19.00%	409,966	77,894
Total Police & Fire		644,206	127,746		645,915	128,694
Total		\$741,857	\$142,516		\$740,225	\$143,208
Employer normal cost rate						
General Service			15.13%			15.39%
Police & Fire			19.83%			19.92%
Aggregate (Default)			19.21%			19.35%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$488,000)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.68%)
B. Actual employer payroll	454,639
C. Payment to transition liability/(surplus)	(21,277)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.27%)
B. Actual employer payroll	464,404
C. Payment to transition liability/(surplus)	(24,475)
4. Supplemental payment to transition liability	0
5. Interest	(33,169)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$475,417)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(475,417)	(488,000)
2. Combined valuation payroll	997,339	871,077
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.02%)	(5.54%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	997,339	871,077
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rogue River Valley Irrigation District/2585
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rogue River Valley Irrigation District/2585

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rogue River Valley Irrigation District/2585

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rogue River Valley Irrigation District -- #2585

September 2016

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Executive Summary

Milliman has prepared this report for Rogue River Valley Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rogue River Valley Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rogue River Valley Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	8.16%	8.16%	8.16%	8.16%	8.16%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	27.72%	27.72%	35.40%	23.48%	28.25%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	28.22%	28.22%	35.90%	23.91%	28.68%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rogue River Valley Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$573,354	\$468,092
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	232,230	242,513
Allocated pooled OPSRP UAL	42,560	33,141
Side account	0	0
Net unfunded pension actuarial accrued liability	848,144	743,746
Combined valuation payroll	299,372	289,894
Net pension UAL as a percentage of payroll	283%	257%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	8.16%	8.27%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,454	\$2,304
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	118,942	14,582	12.44%	114,365	14,227
Total General Service		118,942	14,582		114,365	14,227
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$118,942	\$14,582		\$114,365	\$14,227
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$242,513
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	8.72%
B. Actual employer payroll	141,358
C. Payment to transition liability/(surplus)	12,326
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	9.87%
B. Actual employer payroll	143,447
C. Payment to transition liability/(surplus)	14,159
4. Supplemental payment to transition liability	0
5. Interest	16,202
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$232,230

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	232,230	242,513
2. Combined valuation payroll	299,372	289,894
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	8.16%	8.27%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	299,372	289,894
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Roseburg/2100
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Roseburg/2100

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Roseburg/2100

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Roseburg -- #2100

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Roseburg to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Roseburg.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Roseburg

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.92%	14.64%	20.20%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.49%	20.21%	25.77%	13.59%	18.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.99%	20.71%	26.27%	14.02%	18.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Roseburg

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$20,004,928	\$16,680,986
Allocated pre-SLGRP pooled liability/(surplus)	(1,717,069)	(1,848,759)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,484,960	1,181,024
Side account	0	0
Net unfunded pension actuarial accrued liability	19,772,819	16,013,251
Combined valuation payroll	10,445,404	10,330,697
Net pension UAL as a percentage of payroll	189%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$50,719	\$82,114
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$977,596	\$171,568	17.89%	\$1,009,975	\$180,685
Tier 2 General Service	12.26%	1,190,848	145,998	12.44%	1,170,101	145,561
Total General Service		2,168,444	317,566		2,180,076	326,246
Tier 1 Police & Fire	21.37%	1,604,468	342,875	21.53%	1,653,602	356,021
Tier 2 Police & Fire	18.95%	1,503,225	284,861	19.00%	1,639,760	311,554
Total Police & Fire		3,107,693	627,736		3,293,362	667,575
Total		\$5,276,137	\$945,302		\$5,473,438	\$993,821
Employer normal cost rate						
General Service			14.64%			14.96%
Police & Fire			20.20%			20.27%
Aggregate (Default)			17.92%			18.16%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	10,445,404	10,330,697
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	10,445,404	10,330,697
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Roseburg Urban Sanitary Authority/2669
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Roseburg Urban Sanitary Authority/2669

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Roseburg Urban Sanitary Authority/2669

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Roseburg Urban Sanitary Authority -- #2669

September 2016

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Executive Summary

Milliman has prepared this report for Roseburg Urban Sanitary Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Roseburg Urban Sanitary Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Roseburg Urban Sanitary Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.54%	15.54%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.02%)	(5.02%)	(5.02%)	(5.02%)	(5.02%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.82%	17.82%	22.22%	10.30%	15.07%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.32%	18.32%	22.72%	10.73%	15.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Roseburg Urban Sanitary Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,813,650	\$1,574,035
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(451,553)	(466,696)
Allocated pooled OPSRP UAL	134,627	111,443
Side account	0	0
Net unfunded pension actuarial accrued liability	1,496,724	1,218,782
Combined valuation payroll	946,982	974,815
Net pension UAL as a percentage of payroll	158%	125%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.02%)	(4.73%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,598	\$7,748
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$417,084	\$73,198	17.89%	\$467,151	\$83,573
Tier 2 General Service	12.26%	254,897	31,250	12.44%	240,902	29,968
Total General Service		671,981	104,448		708,053	113,541
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$671,981	\$104,448		\$708,053	\$113,541
Employer normal cost rate						
General Service			15.54%			16.04%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.54%			16.04%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$466,696)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.00%)
B. Actual employer payroll	486,169
C. Payment to transition liability/(surplus)	(24,308)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.79%)
B. Actual employer payroll	466,354
C. Payment to transition liability/(surplus)	(22,339)
4. Supplemental payment to transition liability	0
5. Interest	(31,504)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$451,553)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(451,553)	(466,696)
2. Combined valuation payroll	946,982	974,815
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.02%)	(4.73%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	946,982	974,815
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Rural Road Assessment District #3/2802
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Rural Road Assessment District #3/2802

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Rural Road Assessment District #3/2802

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Rural Road Assessment District #3 -- #2802

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Rural Road Assessment District #3 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Rural Road Assessment District #3.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Rural Road Assessment District #3

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.23%	0.23%	0.23%	0.23%	0.23%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.06%	18.06%	25.74%	13.82%	18.59%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.56%	18.56%	26.24%	14.25%	19.02%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Rural Road Assessment District #3

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$332,061	\$345,239
Allocated pre-SLGRP pooled liability/(surplus)	(28,502)	(38,263)
Transition liability/(surplus)	3,735	3,772
Allocated pooled OPSRP UAL	24,649	24,443
Side account	0	0
Net unfunded pension actuarial accrued liability	331,943	335,191
Combined valuation payroll	173,383	213,810
Net pension UAL as a percentage of payroll	191%	157%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.23%	0.17%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$842	\$1,699
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	100,160	12,280	12.44%	99,845	12,421
Total General Service		100,160	12,280		99,845	12,421
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$100,160	\$12,280		\$99,845	\$12,421
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$3,772
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.17%
B. Actual employer payroll	99,581
C. Payment to transition liability/(surplus)	169
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.15%
B. Actual employer payroll	85,919
C. Payment to transition liability/(surplus)	129
4. Supplemental payment to transition liability	0
5. Interest	261
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$3,735

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	3,735	3,772
2. Combined valuation payroll	173,383	213,810
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.23%	0.17%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	173,383	213,810
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Sandy/2172

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Sandy/2172

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Sandy/2172

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Sandy -- #2172

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Sandy to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Sandy.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Sandy

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.53%	15.19%	19.41%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.74%)	(0.74%)	(0.74%)	(0.74%)	(0.74%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.36%	20.02%	24.24%	12.85%	17.62%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.86%	20.52%	24.74%	13.28%	18.05%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Sandy

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,684,027	\$5,713,839
Allocated pre-SLGRP pooled liability/(surplus)	(659,538)	(633,267)
Transition liability/(surplus)	(281,027)	(295,926)
Allocated pooled OPSRP UAL	570,383	404,543
Side account	0	0
Net unfunded pension actuarial accrued liability	7,313,845	5,189,189
Combined valuation payroll	4,012,150	3,538,636
Net pension UAL as a percentage of payroll	182%	147%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.74%)	(0.83%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$19,482	\$28,127
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$503,292	\$88,328	17.89%	\$473,200	\$84,655
Tier 2 General Service	12.26%	406,538	49,842	12.44%	446,981	55,604
Total General Service		909,830	138,170		920,181	140,259
Tier 1 Police & Fire	21.37%	80,700	17,246	21.53%	76,773	16,529
Tier 2 Police & Fire	18.95%	342,699	64,941	19.00%	324,529	61,661
Total Police & Fire		423,399	82,187		401,302	78,190
Total		\$1,333,229	\$220,357		\$1,321,483	\$218,449
Employer normal cost rate						
General Service			15.19%			15.24%
Police & Fire			19.41%			19.48%
Aggregate (Default)			16.53%			16.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$295,926)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.96%)
B. Actual employer payroll	1,803,584
C. Payment to transition liability/(surplus)	(17,314)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.85%)
B. Actual employer payroll	2,022,502
C. Payment to transition liability/(surplus)	(17,192)
4. Supplemental payment to transition liability	0
5. Interest	(19,607)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$281,027)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(281,027)	(295,926)
2. Combined valuation payroll	4,012,150	3,538,636
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.74%)	(0.83%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	4,012,150	3,538,636
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sandy Fire Department/2551
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sandy Fire Department/2551

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sandy Fire Department/2551

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sandy Fire Department -- #2551

September 2016

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Executive Summary

Milliman has prepared this report for Sandy Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sandy Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sandy Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.54%	12.26%	20.08%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.84%)	(5.84%)	(5.84%)	(5.84%)	(5.84%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.27%	11.99%	19.81%	7.75%	12.52%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.77%	12.49%	20.31%	8.18%	12.95%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sandy Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,126,037	\$1,582,811
Allocated pre-SLGRP pooled liability/(surplus)	(182,483)	(175,423)
Transition liability/(surplus)	(616,563)	(631,062)
Allocated pooled OPSRP UAL	157,815	112,064
Side account	0	0
Net unfunded pension actuarial accrued liability	1,484,806	888,390
Combined valuation payroll	1,110,092	980,250
Net pension UAL as a percentage of payroll	134%	91%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.84%)	(6.36%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,390	\$7,792
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	59,398	7,282	12.44%	57,367	7,136
Total General Service		59,398	7,282		57,367	7,136
Tier 1 Police & Fire	21.37%	372,088	79,515	21.53%	354,946	76,420
Tier 2 Police & Fire	18.95%	423,261	80,208	19.00%	335,939	63,828
Total Police & Fire		795,349	159,723		690,885	140,248
Total		\$854,747	\$167,005		\$748,252	\$147,384
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			20.08%			20.30%
Aggregate (Default)			19.54%			19.70%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$631,062)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.36%)
B. Actual employer payroll	556,443
C. Payment to transition liability/(surplus)	(24,261)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.00%)
B. Actual employer payroll	554,242
C. Payment to transition liability/(surplus)	(33,254)
4. Supplemental payment to transition liability	0
5. Interest	(43,016)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$616,563)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(616,563)	(631,062)
2. Combined valuation payroll	1,110,092	980,250
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.84%)	(6.36%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,110,092	980,250
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Santa Clara Rural Fire Protection District/2544
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Santa Clara Rural Fire Protection District/2544

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Santa Clara Rural Fire Protection District/2544

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Santa Clara Rural Fire Protection District -- #2544

September 2016

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Executive Summary

Milliman has prepared this report for Santa Clara Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Santa Clara Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Santa Clara Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.74%)	(1.74%)	(1.74%)	(1.74%)	(1.74%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	26.93%	20.37%	26.93%	13.58%	18.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	27.43%	20.87%	27.43%	14.01%	18.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Santa Clara Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$290,356	\$344,887
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(25,060)	(27,910)
Allocated pooled OPSRP UAL	21,553	24,418
Side account	0	0
Net unfunded pension actuarial accrued liability	286,849	341,395
Combined valuation payroll	151,607	213,592
Net pension UAL as a percentage of payroll	189%	160%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.74%)	(1.29%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$736	\$1,698
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	95,371	20,381	21.53%	164,185	35,349
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		95,371	20,381		164,185	35,349
Total		\$95,371	\$20,381		\$164,185	\$35,349
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.37%			21.53%
Aggregate (Default)			21.37%			21.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$27,910)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.28%)
B. Actual employer payroll	105,450
C. Payment to transition liability/(surplus)	(3,459)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.45%)
B. Actual employer payroll	78,536
C. Payment to transition liability/(surplus)	(1,139)
4. Supplemental payment to transition liability	0
5. Interest	(1,748)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$25,060)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(25,060)	(27,910)
2. Combined valuation payroll	151,607	213,592
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.74%)	(1.29%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	151,607	213,592
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Scappoose/2176
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Scappoose/2176

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Scappoose/2176

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Scappoose -- #2176

September 2016

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Executive Summary

Milliman has prepared this report for City of Scappoose to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Scappoose.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Scappoose

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.06%	14.78%	19.65%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.43%)	(1.43%)	(1.43%)	(1.43%)	(1.43%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.93%	20.65%	25.52%	13.89%	18.66%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.43%	21.15%	26.02%	14.32%	19.09%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Scappoose

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,926,004	\$2,572,343
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(279,280)	(287,785)
Allocated pooled OPSRP UAL	291,426	182,123
Side account	0	0
Net unfunded pension actuarial accrued liability	3,938,150	2,466,681
Combined valuation payroll	2,049,930	1,593,077
Net pension UAL as a percentage of payroll	192%	155%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.43%)	(1.79%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,954	\$12,663
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$364,500	\$63,970	17.89%	\$236,363	\$42,285
Tier 2 General Service	12.26%	400,415	49,091	12.44%	388,852	48,373
Total General Service		764,915	113,061		625,215	90,658
Tier 1 Police & Fire	21.37%	78,241	16,720	21.53%	75,394	16,232
Tier 2 Police & Fire	18.95%	194,189	36,799	19.00%	186,884	35,508
Total Police & Fire		272,430	53,519		262,278	51,740
Total		\$1,037,345	\$166,580		\$887,493	\$142,398
Employer normal cost rate						
General Service			14.78%			14.50%
Police & Fire			19.65%			19.73%
Aggregate (Default)			16.06%			16.04%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$287,785)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.28%)
B. Actual employer payroll	905,460
C. Payment to transition liability/(surplus)	(11,590)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.63%)
B. Actual employer payroll	1,006,158
C. Payment to transition liability/(surplus)	(16,400)
4. Supplemental payment to transition liability	0
5. Interest	(19,485)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$279,280)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(279,280)	(287,785)
2. Combined valuation payroll	2,049,930	1,593,077
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.43%)	(1.79%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,049,930	1,593,077
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Scappoose Public Library/2709
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Scappoose Public Library/2709

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Scappoose Public Library/2709

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Scappoose Public Library -- #2709

September 2016

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Executive Summary

Milliman has prepared this report for Scappoose Public Library to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Scappoose Public Library.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Scappoose Public Library

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	17.09%	17.09%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.60%)	(9.60%)	(9.60%)	(9.60%)	(9.60%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	14.79%	14.79%	17.64%	5.72%	10.49%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.29%	15.29%	18.14%	6.15%	10.92%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Scappoose Public Library

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$230,256	\$232,097
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(109,748)	(115,978)
Allocated pooled OPSRP UAL	17,092	16,433
Side account	0	0
Net unfunded pension actuarial accrued liability	137,600	132,552
Combined valuation payroll	120,226	143,740
Net pension UAL as a percentage of payroll	114%	92%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.60%)	(7.97%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$584	\$1,143
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$60,106	\$10,549	17.89%	\$58,876	\$10,533
Tier 2 General Service	12.26%	5,710	700	12.44%	0	0
Total General Service		65,816	11,249		58,876	10,533
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$65,816	\$11,249		\$58,876	\$10,533
Employer normal cost rate						
General Service			17.09%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.09%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$115,978)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(12.05%)
B. Actual employer payroll	63,624
C. Payment to transition liability/(surplus)	(7,787)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.35%)
B. Actual employer payroll	65,253
C. Payment to transition liability/(surplus)	(6,100)
4. Supplemental payment to transition liability	0
5. Interest	(7,657)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$109,748)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(109,748)	(115,978)
2. Combined valuation payroll	120,226	143,740
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.60%)	(7.97%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	120,226	143,740
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Scappoose Rural Fire Protection District/2739
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Scappoose Rural Fire Protection District/2739

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Scappoose Rural Fire Protection District/2739

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Scappoose Rural Fire Protection District -- #2739

September 2016

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Executive Summary

Milliman has prepared this report for Scappoose Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Scappoose Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Scappoose Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.44%	14.81%	19.44%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.64%)	(0.64%)	(0.64%)	(0.64%)	(0.64%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.37%	19.74%	24.37%	12.95%	17.72%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.87%	20.24%	24.87%	13.38%	18.15%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Scappoose Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,653,196	\$2,343,188
Allocated pre-SLGRP pooled liability/(surplus)	(227,730)	(259,696)
Transition liability/(surplus)	(84,519)	(88,305)
Allocated pooled OPSRP UAL	196,946	165,899
Side account	0	0
Net unfunded pension actuarial accrued liability	2,537,893	2,161,086
Combined valuation payroll	1,385,344	1,451,159
Net pension UAL as a percentage of payroll	183%	149%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.64%)	(0.60%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,727	\$11,535
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	185,746	39,694	21.53%	299,206	64,419
Tier 2 Police & Fire	18.95%	730,488	138,427	19.00%	716,068	136,053
Total Police & Fire		916,234	178,121		1,015,274	200,472
Total		\$916,234	\$178,121		\$1,015,274	\$200,472
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.44%			19.75%
Aggregate (Default)			19.44%			19.75%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$88,305)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.74%)
B. Actual employer payroll	698,461
C. Payment to transition liability/(surplus)	(5,169)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.60%)
B. Actual employer payroll	752,387
C. Payment to transition liability/(surplus)	(4,514)
4. Supplemental payment to transition liability	0
5. Interest	(5,897)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$84,519)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(84,519)	(88,305)
2. Combined valuation payroll	1,385,344	1,451,159
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.64%)	(0.60%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,385,344	1,451,159
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Scio Fire District/2605
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Scio Fire District/2605

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Scio Fire District/2605

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Scio Fire District -- #2605

September 2016

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Executive Summary

Milliman has prepared this report for Scio Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Scio Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Scio Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.34%	17.55%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(12.14%)	(12.14%)	(12.14%)	(12.14%)	(12.14%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.50%	12.71%	16.53%	3.18%	7.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.00%	13.21%	17.03%	3.61%	8.38%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Scio Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$225,414	\$159,311
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(135,747)	(145,732)
Allocated pooled OPSRP UAL	16,732	11,279
Side account	0	0
Net unfunded pension actuarial accrued liability	106,399	24,858
Combined valuation payroll	117,698	98,663
Net pension UAL as a percentage of payroll	90%	25%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(12.14%)	(14.60%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$572	\$784
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$31,775	\$5,577	17.89%	\$29,201	\$5,224
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		31,775	5,577		29,201	5,224
Tier 1 Police & Fire	21.37%	85,923	18,362	21.53%	69,462	14,955
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		85,923	18,362		69,462	14,955
Total		\$117,698	\$23,939		\$98,663	\$20,179
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			21.37%			21.53%
Aggregate (Default)			20.34%			20.45%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$145,732)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(13.79%)
B. Actual employer payroll	55,529
C. Payment to transition liability/(surplus)	(7,657)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(20.50%)
B. Actual employer payroll	57,552
C. Payment to transition liability/(surplus)	(11,799)
4. Supplemental payment to transition liability	0
5. Interest	(9,471)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$135,747)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(135,747)	(145,732)
2. Combined valuation payroll	117,698	98,663
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(12.14%)	(14.60%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	117,698	98,663
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Seal Rock Water District/2734
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Seal Rock Water District/2734

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Seal Rock Water District/2734

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Seal Rock Water District -- #2734

September 2016

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Executive Summary

Milliman has prepared this report for Seal Rock Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Seal Rock Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Seal Rock Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.45%	14.45%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.04%)	(5.04%)	(5.04%)	(5.04%)	(5.04%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.71%	16.71%	22.20%	10.28%	15.05%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.21%	17.21%	22.70%	10.71%	15.48%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Seal Rock Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$927,208	\$713,263
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(231,878)	(246,981)
Allocated pooled OPSRP UAL	68,826	50,499
Side account	0	0
Net unfunded pension actuarial accrued liability	764,156	516,781
Combined valuation payroll	484,134	441,731
Net pension UAL as a percentage of payroll	158%	117%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.04%)	(5.53%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,351	\$3,511
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$88,642	\$15,557	17.89%	\$90,795	\$16,243
Tier 2 General Service	12.26%	125,449	15,380	12.44%	123,503	15,364
Total General Service		214,091	30,937		214,298	31,607
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$214,091	\$30,937		\$214,298	\$31,607
Employer normal cost rate						
General Service			14.45%			14.75%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.45%			14.75%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$246,981)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.19%)
B. Actual employer payroll	214,181
C. Payment to transition liability/(surplus)	(17,541)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.82%)
B. Actual employer payroll	236,076
C. Payment to transition liability/(surplus)	(13,740)
4. Supplemental payment to transition liability	0
5. Interest	(16,178)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$231,878)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(231,878)	(246,981)
2. Combined valuation payroll	484,134	441,731
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.04%)	(5.53%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	484,134	441,731
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Shady Cove/2254
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Shady Cove/2254

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Shady Cove/2254

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Shady Cove -- #2254

September 2016

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Executive Summary

Milliman has prepared this report for City of Shady Cove to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Shady Cove.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Shady Cove

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(16.36%)	(16.36%)	(16.36%)	(16.36%)	(16.36%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	6.72%	5.75%	10.88%	0.00%	3.73%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	7.22%	6.25%	11.38%	0.43%	4.16%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Shady Cove

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$407,596	\$267,298
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(330,828)	(331,842)
Allocated pooled OPSRP UAL	30,256	18,925
Side account	0	0
Net unfunded pension actuarial accrued liability	107,024	(45,619)
Combined valuation payroll	212,823	165,540
Net pension UAL as a percentage of payroll	50%	(28%)
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(16.36%)	(19.81%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,033	\$1,316
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$331,842)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(15.19%)
B. Actual employer payroll	89,968
C. Payment to transition liability/(surplus)	(11,138)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(18.77%)
B. Actual employer payroll	104,155
C. Payment to transition liability/(surplus)	(12,957)
4. Supplemental payment to transition liability	0
5. Interest	(23,081)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$330,828)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(330,828)	(331,842)
2. Combined valuation payroll	212,823	165,540
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(16.36%)	(19.81%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	212,823	165,540
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sheridan Fire District/2630
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sheridan Fire District/2630

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sheridan Fire District/2630

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sheridan Fire District -- #2630

September 2016

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Executive Summary

Milliman has prepared this report for Sheridan Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sheridan Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sheridan Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.57%	17.55%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.55%)	(4.55%)	(4.55%)	(4.55%)	(4.55%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.32%	20.30%	24.12%	10.77%	15.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.82%	20.80%	24.62%	11.20%	15.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sheridan Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$668,326	\$421,411
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(150,912)	(157,080)
Allocated pooled OPSRP UAL	49,610	29,836
Side account	0	0
Net unfunded pension actuarial accrued liability	567,024	294,167
Combined valuation payroll	348,961	260,984
Net pension UAL as a percentage of payroll	162%	113%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.55%)	(5.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,694	\$2,074
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$62,083	\$10,896	17.89%	\$6,509	\$1,164
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		62,083	10,896		6,509	1,164
Tier 1 Police & Fire	21.37%	69,483	14,849	21.53%	63,977	13,774
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		69,483	14,849		63,977	13,774
Total		\$131,566	\$25,745		\$70,486	\$14,938
Employer normal cost rate						
General Service			17.55%			17.88%
Police & Fire			21.37%			21.53%
Aggregate (Default)			19.57%			21.19%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$157,080)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.64%)
B. Actual employer payroll	145,616
C. Payment to transition liability/(surplus)	(8,213)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.95%)
B. Actual employer payroll	171,391
C. Payment to transition liability/(surplus)	(8,484)
4. Supplemental payment to transition liability	0
5. Interest	(10,529)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$150,912)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(150,912)	(157,080)
2. Combined valuation payroll	348,961	260,984
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.55%)	(5.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	348,961	260,984
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sherman County/2016
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sherman County/2016

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sherman County/2016

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sherman County -- #2016

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Sherman County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sherman County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sherman County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.49%	14.12%	19.90%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.66%	1.66%	1.66%	1.66%	1.66%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.72%	21.35%	27.13%	15.25%	20.02%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.22%	21.85%	27.63%	15.68%	20.45%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sherman County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,483,562	\$3,655,142
Allocated pre-SLGRP pooled liability/(surplus)	(384,834)	(405,101)
Transition liability/(surplus)	368,964	384,510
Allocated pooled OPSRP UAL	332,813	258,786
Side account	0	0
Net unfunded pension actuarial accrued liability	4,800,505	3,893,337
Combined valuation payroll	2,341,054	2,263,665
Net pension UAL as a percentage of payroll	205%	172%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.66%	1.68%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$11,367	\$17,993
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$379,254	\$66,559	17.89%	\$418,179	\$74,812
Tier 2 General Service	12.26%	702,203	86,090	12.44%	636,185	79,141
Total General Service		1,081,457	152,649		1,054,364	153,953
Tier 1 Police & Fire	21.37%	132,727	28,364	21.53%	141,378	30,439
Tier 2 Police & Fire	18.95%	204,250	38,705	19.00%	182,982	34,767
Total Police & Fire		336,977	67,069		324,360	65,206
Total		\$1,418,434	\$219,718		\$1,378,724	\$219,159
Employer normal cost rate						
General Service			14.12%			14.60%
Police & Fire			19.90%			20.10%
Aggregate (Default)			15.49%			15.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$384,510
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.70%
B. Actual employer payroll	1,180,354
C. Payment to transition liability/(surplus)	20,066
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.70%
B. Actual employer payroll	1,248,366
C. Payment to transition liability/(surplus)	21,222
4. Supplemental payment to transition liability	0
5. Interest	25,742
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$368,964

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	368,964	384,510
2. Combined valuation payroll	2,341,054	2,263,665
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.66%	1.68%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,341,054	2,263,665
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Sherwood/2142
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Sherwood/2142

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Sherwood/2142

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Sherwood -- #2142

September 2016

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Executive Summary

Milliman has prepared this report for City of Sherwood to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Sherwood.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Sherwood

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.94%	13.52%	19.87%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.25%)	(0.25%)	(0.25%)	(0.25%)	(0.25%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.26%	18.84%	25.19%	13.34%	18.11%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.76%	19.34%	25.69%	13.77%	18.54%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Sherwood

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$13,317,620	\$10,269,428
Allocated pre-SLGRP pooled liability/(surplus)	(1,143,082)	(1,138,164)
Transition liability/(surplus)	(165,229)	(171,904)
Allocated pooled OPSRP UAL	988,563	727,082
Side account	0	0
Net unfunded pension actuarial accrued liability	12,997,872	9,686,442
Combined valuation payroll	6,953,683	6,359,957
Net pension UAL as a percentage of payroll	187%	152%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.25%)	(0.27%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$33,765	\$50,553
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$434,789	\$76,305	17.89%	\$423,233	\$75,716
Tier 2 General Service	12.26%	1,393,672	170,864	12.44%	1,337,857	166,429
Total General Service		1,828,461	247,169		1,761,090	242,145
Tier 1 Police & Fire	21.37%	430,474	91,992	21.53%	435,432	93,749
Tier 2 Police & Fire	18.95%	698,378	132,343	19.00%	742,613	141,096
Total Police & Fire		1,128,852	224,335		1,178,045	234,845
Total		\$2,957,313	\$471,504		\$2,939,135	\$476,990
Employer normal cost rate						
General Service			13.52%			13.75%
Police & Fire			19.87%			19.94%
Aggregate (Default)			15.94%			16.23%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$171,904)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.30%)
B. Actual employer payroll	3,075,314
C. Payment to transition liability/(surplus)	(9,226)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.27%)
B. Actual employer payroll	3,324,875
C. Payment to transition liability/(surplus)	(8,977)
4. Supplemental payment to transition liability	0
5. Interest	(11,528)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$165,229)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(165,229)	(171,904)
2. Combined valuation payroll	6,953,683	6,359,957
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.25%)	(0.27%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,953,683	6,359,957
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Silver Falls Library District/2790
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Silver Falls Library District/2790

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Silver Falls Library District/2790

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Silver Falls Library District -- #2790

September 2016

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Executive Summary

Milliman has prepared this report for Silver Falls Library District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Silver Falls Library District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Silver Falls Library District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.11%	13.11%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.07%)	(2.07%)	(2.07%)	(2.07%)	(2.07%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.34%	18.34%	25.17%	13.25%	18.02%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.84%	18.84%	25.67%	13.68%	18.45%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Silver Falls Library District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$890,065	\$507,710
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(91,413)	(94,747)
Allocated pooled OPSRP UAL	66,069	35,946
Side account	0	0
Net unfunded pension actuarial accrued liability	864,721	448,909
Combined valuation payroll	464,740	314,430
Net pension UAL as a percentage of payroll	186%	143%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.07%)	(2.98%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,257	\$2,499
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$29,195	\$5,124	17.89%	\$25,288	\$4,524
Tier 2 General Service	12.26%	153,085	18,768	12.44%	144,831	18,017
Total General Service		182,280	23,892		170,119	22,541
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$182,280	\$23,892		\$170,119	\$22,541
Employer normal cost rate						
General Service			13.11%			13.25%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.11%			13.25%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$94,747)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.68%)
B. Actual employer payroll	182,803
C. Payment to transition liability/(surplus)	(4,899)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.30%)
B. Actual employer payroll	209,255
C. Payment to transition liability/(surplus)	(4,813)
4. Supplemental payment to transition liability	0
5. Interest	(6,378)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$91,413)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(91,413)	(94,747)
2. Combined valuation payroll	464,740	314,430
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.07%)	(2.98%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	464,740	314,430
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Silverton/2273
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Silverton/2273

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Silverton/2273

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Silverton -- #2273

September 2016

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Executive Summary

Milliman has prepared this report for City of Silverton to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Silverton.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Silverton

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.67%	15.30%	19.80%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.09%)	(0.09%)	(0.09%)	(0.09%)	(0.09%)
Side account rate relief ²	(2.24%)	(2.24%)	(2.24%)	(2.24%)	(2.24%)
Net pension contribution rate	19.91%	18.54%	23.04%	11.26%	16.03%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.41%	19.04%	23.54%	11.69%	16.46%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Silverton

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,536,675	\$4,485,591
Allocated pre-SLGRP pooled liability/(surplus)	(475,225)	(497,140)
Transition liability/(surplus)	(25,638)	(26,380)
Allocated pooled OPSRP UAL	410,986	317,582
Side account	614,164	660,951
Net unfunded pension actuarial accrued liability	4,832,634	3,618,702
Combined valuation payroll	2,890,928	2,777,970
Net pension UAL as a percentage of payroll	167%	130%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.09%)	(0.09%)
Side account rate relief	(2.24%)	(2.35%)
Allocated pooled RHIA UAL	\$14,037	\$22,081
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$611,654	\$107,345	17.89%	\$592,578	\$106,012
Tier 2 General Service	12.26%	453,042	55,543	12.44%	563,694	70,124
Total General Service		1,064,696	162,888		1,156,272	176,136
Tier 1 Police & Fire	21.37%	164,338	35,119	21.53%	121,779	26,219
Tier 2 Police & Fire	18.95%	304,413	57,686	19.00%	305,618	58,067
Total Police & Fire		468,751	92,805		427,397	84,286
Total		\$1,533,447	\$255,693		\$1,583,669	\$260,422
Employer normal cost rate						
General Service			15.30%			15.23%
Police & Fire			19.80%			19.72%
Aggregate (Default)			16.67%			16.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$26,380)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.09%)
B. Actual employer payroll	1,374,276
C. Payment to transition liability/(surplus)	(1,237)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.09%)
B. Actual employer payroll	1,437,093
C. Payment to transition liability/(surplus)	(1,294)
4. Supplemental payment to transition liability	0
5. Interest	(1,789)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$25,638)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(25,638)	(26,380)
2. Combined valuation payroll	2,890,928	2,777,970
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.09%)	(0.09%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$660,951	\$660,951
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(59,541)	(59,541)
5. Side account earnings during 2015		13,754	13,754
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$614,164	\$614,164

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$614,164	\$660,951
Side Account 2	0	0
Side Account 3	0	0
Total	\$614,164	\$660,951

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$614,164	\$660,951
2. Combined valuation payroll	2,890,928	2,777,970
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(2.24%)	(2.35%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Silverton Fire District/2659
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Silverton Fire District/2659

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Silverton Fire District/2659

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No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Silverton Fire District -- #2659

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Silverton Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Silverton Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Silverton Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.62%	12.67%	20.49%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.86%)	(2.86%)	(2.86%)	(2.86%)	(2.86%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	22.33%	15.38%	23.20%	10.73%	15.50%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.83%	15.88%	23.70%	11.16%	15.93%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Silverton Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$748,875	\$593,640
Allocated pre-SLGRP pooled liability/(surplus)	(64,278)	(65,793)
Transition liability/(surplus)	(106,464)	(109,303)
Allocated pooled OPSRP UAL	55,589	42,030
Side account	0	0
Net unfunded pension actuarial accrued liability	633,722	460,574
Combined valuation payroll	391,019	367,647
Net pension UAL as a percentage of payroll	162%	125%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.86%)	(2.94%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,899	\$2,922
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$3,351	\$588	17.89%	\$3,069	\$549
Tier 2 General Service	12.26%	39,966	4,900	12.44%	0	0
Total General Service		43,317	5,488		3,069	549
Tier 1 Police & Fire	21.37%	220,694	47,162	21.53%	210,068	45,228
Tier 2 Police & Fire	18.95%	127,008	24,068	19.00%	154,510	29,357
Total Police & Fire		347,702	71,230		364,578	74,585
Total		\$391,019	\$76,718		\$367,647	\$75,134
Employer normal cost rate						
General Service			12.67%			17.89%
Police & Fire			20.49%			20.46%
Aggregate (Default)			19.62%			20.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$109,303)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.76%)
B. Actual employer payroll	183,916
C. Payment to transition liability/(surplus)	(5,076)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.48%)
B. Actual employer payroll	209,301
C. Payment to transition liability/(surplus)	(5,191)
4. Supplemental payment to transition liability	0
5. Interest	(7,428)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$106,464)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(106,464)	(109,303)
2. Combined valuation payroll	391,019	367,647
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.86%)	(2.94%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	391,019	367,647
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Sisters/2221

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Sisters/2221

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Sisters/2221

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Sisters -- #2221

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Sisters to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Sisters.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Sisters

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(4.05%)	(4.05%)	(4.05%)	(4.05%)	(4.05%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.78%	13.78%	21.46%	9.54%	14.31%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.28%	14.28%	21.96%	9.97%	14.74%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Sisters

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,681,310	\$1,359,912
Allocated pre-SLGRP pooled liability/(surplus)	(144,311)	(150,720)
Transition liability/(surplus)	(338,129)	(345,784)
Allocated pooled OPSRP UAL	124,803	96,283
Side account	0	0
Net unfunded pension actuarial accrued liability	1,323,673	959,691
Combined valuation payroll	877,882	842,207
Net pension UAL as a percentage of payroll	151%	114%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(4.05%)	(4.06%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,263	\$6,694
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	214,719	26,325	12.44%	251,839	31,329
Total General Service		214,719	26,325		251,839	31,329
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$214,719	\$26,325		\$251,839	\$31,329
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$345,784)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.75%)
B. Actual employer payroll	387,088
C. Payment to transition liability/(surplus)	(14,516)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.13%)
B. Actual employer payroll	405,065
C. Payment to transition liability/(surplus)	(16,729)
4. Supplemental payment to transition liability	0
5. Interest	(23,590)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$338,129)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(338,129)	(345,784)
2. Combined valuation payroll	877,882	842,207
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.05%)	(4.06%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	877,882	842,207
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Siuslaw Public Library/2692
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Siuslaw Public Library/2692

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Siuslaw Public Library/2692

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Siuslaw Public Library -- #2692

September 2016

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Executive Summary

Milliman has prepared this report for Siuslaw Public Library to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Siuslaw Public Library.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Siuslaw Public Library

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.15%	14.15%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.29%)	(2.29%)	(2.29%)	(2.29%)	(2.29%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.43%	17.43%	23.22%	11.30%	16.07%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.93%	17.93%	23.72%	11.73%	16.50%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Siuslaw Public Library

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$702,865	\$626,196
Allocated pre-SLGRP pooled liability/(surplus)	(60,329)	(69,401)
Transition liability/(surplus)	(79,759)	(82,808)
Allocated pooled OPSRP UAL	52,173	44,335
Side account	0	0
Net unfunded pension actuarial accrued liability	614,950	518,322
Combined valuation payroll	366,995	387,809
Net pension UAL as a percentage of payroll	168%	134%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.29%)	(2.11%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,782	\$3,083
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$88,103	\$15,462	17.89%	\$85,551	\$15,305
Tier 2 General Service	12.26%	158,363	19,415	12.44%	185,896	23,125
Total General Service		246,466	34,877		271,447	38,430
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$246,466	\$34,877		\$271,447	\$38,430
Employer normal cost rate						
General Service			14.15%			14.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.15%			14.16%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$82,808)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.98%)
B. Actual employer payroll	187,748
C. Payment to transition liability/(surplus)	(3,717)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.56%)
B. Actual employer payroll	191,308
C. Payment to transition liability/(surplus)	(4,897)
4. Supplemental payment to transition liability	0
5. Interest	(5,565)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$79,759)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(79,759)	(82,808)
2. Combined valuation payroll	366,995	387,809
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.29%)	(2.11%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	366,995	387,809
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Siuslaw Rural Fire Protection District #1/2794
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Siuslaw Rural Fire Protection District #1/2794

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Siuslaw Rural Fire Protection District #1/2794

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Siuslaw Rural Fire Protection District #1 -- #2794

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Siuslaw Rural Fire Protection District #1 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Siuslaw Rural Fire Protection District #1.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Siuslaw Rural Fire Protection District #1

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.33%	14.81%	21.33%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(0.40%)	(0.40%)	(0.40%)	(0.40%)	(0.40%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	28.23%	21.71%	28.23%	14.92%	19.69%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	28.73%	22.21%	28.73%	15.35%	20.12%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Siuslaw Rural Fire Protection District #1

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,235,998	\$893,429
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(24,447)	(29,221)
Allocated pooled OPSRP UAL	91,748	63,255
Side account	0	0
Net unfunded pension actuarial accrued liability	1,303,299	927,463
Combined valuation payroll	645,366	553,309
Net pension UAL as a percentage of payroll	202%	168%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(0.40%)	(0.52%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,134	\$4,398
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$902	\$161
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		902	161
Tier 1 Police & Fire	21.37%	168,971	36,109	21.53%	174,465	37,562
Tier 2 Police & Fire	18.95%	2,805	532	19.00%	17,589	3,342
Total Police & Fire		171,776	36,641		192,054	40,904
Total		\$171,776	\$36,641		\$192,956	\$41,065
Employer normal cost rate						
General Service			14.81%			17.85%
Police & Fire			21.33%			21.30%
Aggregate (Default)			21.33%			21.28%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$29,221)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.55%)
B. Actual employer payroll	250,283
C. Payment to transition liability/(surplus)	(3,879)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.81%)
B. Actual employer payroll	321,205
C. Payment to transition liability/(surplus)	(2,601)
4. Supplemental payment to transition liability	0
5. Interest	(1,706)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$24,447)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(24,447)	(29,221)
2. Combined valuation payroll	645,366	553,309
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.40%)	(0.52%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	645,366	553,309
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

South Suburban Sanitary District/2599
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
South Suburban Sanitary District/2599

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
South Suburban Sanitary District/2599

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

South Suburban Sanitary District -- #2599

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for South Suburban Sanitary District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to South Suburban Sanitary District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for South Suburban Sanitary District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.54%	15.54%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.86%)	(1.86%)	(1.86%)	(1.86%)	(1.86%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.98%	20.98%	25.38%	13.46%	18.23%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.48%	21.48%	25.88%	13.89%	18.66%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

South Suburban Sanitary District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,488,474	\$1,149,512
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(137,069)	(142,738)
Allocated pooled OPSRP UAL	110,489	81,386
Side account	0	0
Net unfunded pension actuarial accrued liability	1,461,894	1,088,160
Combined valuation payroll	777,194	711,904
Net pension UAL as a percentage of payroll	188%	153%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.86%)	(1.98%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,774	\$5,659
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$190,365	\$33,409	17.89%	\$186,355	\$33,339
Tier 2 General Service	12.26%	116,483	14,281	12.44%	116,218	14,458
Total General Service		306,848	47,690		302,573	47,797
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$306,848	\$47,690		\$302,573	\$47,797
Employer normal cost rate						
General Service			15.54%			15.80%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.54%			15.80%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$142,738)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.22%)
B. Actual employer payroll	346,415
C. Payment to transition liability/(surplus)	(7,690)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.01%)
B. Actual employer payroll	375,213
C. Payment to transition liability/(surplus)	(7,542)
4. Supplemental payment to transition liability	0
5. Interest	(9,563)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$137,069)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(137,069)	(142,738)
2. Combined valuation payroll	777,194	711,904
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.86%)	(1.98%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	777,194	711,904
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Southwest Lincoln County Water District/2766
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Southwest Lincoln County Water District/2766

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Southwest Lincoln County Water District/2766

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Southwest Lincoln County Water District -- #2766

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Southwest Lincoln County Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Southwest Lincoln County Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Southwest Lincoln County Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.32%	13.32%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.19%)	(1.19%)	(1.19%)	(1.19%)	(1.19%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.70%	17.70%	24.32%	12.40%	17.17%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	18.20%	18.20%	24.82%	12.83%	17.60%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Southwest Lincoln County Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$618,350	\$409,774
Allocated pre-SLGRP pooled liability/(surplus)	(53,074)	(45,415)
Transition liability/(surplus)	(36,466)	(38,029)
Allocated pooled OPSRP UAL	45,900	29,012
Side account	0	0
Net unfunded pension actuarial accrued liability	574,710	355,342
Combined valuation payroll	322,866	253,777
Net pension UAL as a percentage of payroll	178%	140%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.19%)	(1.48%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,568	\$2,017
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$47,257	\$8,294	17.89%	\$40,519	\$7,249
Tier 2 General Service	12.26%	189,545	23,238	12.44%	175,975	21,891
Total General Service		236,802	31,532		216,494	29,140
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$236,802	\$31,532		\$216,494	\$29,140
Employer normal cost rate						
General Service			13.32%			13.46%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.32%			13.46%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$38,029)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.25%)
B. Actual employer payroll	131,060
C. Payment to transition liability/(surplus)	(1,638)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.60%)
B. Actual employer payroll	154,307
C. Payment to transition liability/(surplus)	(2,469)
4. Supplemental payment to transition liability	0
5. Interest	(2,544)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$36,466)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(36,466)	(38,029)
2. Combined valuation payroll	322,866	253,777
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.19%)	(1.48%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	322,866	253,777
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Southwestern Community College/2998
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Southwestern Community College/2998

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Southwestern Community College/2998

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Southwestern Community College -- #2998

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Southwestern Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Southwestern Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Southwestern Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(11.31%)	(11.31%)	(11.31%)	(11.31%)	(11.31%)
Net pension contribution rate	12.28%	12.28%	17.69%	5.77%	10.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.78%	12.78%	18.19%	6.20%	10.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Southwestern Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$20,084,684	\$16,810,905
Allocated pre-SLGRP pooled liability/(surplus)	1,754,962	1,878,515
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,490,880	1,190,222
Side account	11,272,729	12,098,242
Net unfunded pension actuarial accrued liability	12,057,797	7,781,400
Combined valuation payroll	10,487,048	10,411,157
Net pension UAL as a percentage of payroll	115%	75%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(11.31%)	(11.48%)
Allocated pooled RHIA UAL	\$50,922	\$82,754
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$12,098,242	\$12,098,242
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,076,060)	(1,076,060)
5. Side account earnings during 2015		251,547	251,547
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$11,272,729	\$11,272,729

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$11,272,729	\$12,098,242
Side Account 2	0	0
Side Account 3	0	0
Total	\$11,272,729	\$12,098,242

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$11,272,729	\$12,098,242
2. Combined valuation payroll	10,487,048	10,411,157
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(11.31%)	(11.48%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Springfield/2278

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Springfield/2278

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Springfield/2278

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Springfield -- #2278

September 2016

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Executive Summary

Milliman has prepared this report for City of Springfield to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Springfield.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Springfield

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.49%	13.20%	20.07%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(7.44%)	(7.44%)	(7.44%)	(7.44%)	(7.44%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.35%	13.06%	19.93%	7.88%	12.65%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.85%	13.56%	20.43%	8.31%	13.08%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Springfield

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$56,161,661	\$43,510,844
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(20,737,710)	(21,439,150)
Allocated pooled OPSRP UAL	4,168,863	3,080,593
Side account	0	0
Net unfunded pension actuarial accrued liability	39,592,814	25,152,287
Combined valuation payroll	29,324,337	26,946,690
Net pension UAL as a percentage of payroll	135%	93%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(7.44%)	(7.86%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$142,389	\$214,188
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,433,710	\$251,616	17.89%	\$1,641,908	\$293,737
Tier 2 General Service	12.26%	6,649,696	815,253	12.44%	6,566,820	816,912
Total General Service		8,083,406	1,066,869		8,208,728	1,110,649
Tier 1 Police & Fire	21.37%	3,436,720	734,427	21.53%	3,218,082	692,853
Tier 2 Police & Fire	18.95%	3,997,638	757,552	19.00%	3,962,112	752,801
Total Police & Fire		7,434,358	1,491,979		7,180,194	1,445,654
Total		\$15,517,764	\$2,558,848		\$15,388,922	\$2,556,303
Employer normal cost rate						
General Service			13.20%			13.53%
Police & Fire			20.07%			20.13%
Aggregate (Default)			16.49%			16.61%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$21,439,150)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.66%)
B. Actual employer payroll	13,794,044
C. Payment to transition liability/(surplus)	(1,056,624)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.56%)
B. Actual employer payroll	14,439,595
C. Payment to transition liability/(surplus)	(1,091,633)
4. Supplemental payment to transition liability	0
5. Interest	(1,446,817)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$20,737,710)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(20,737,710)	(21,439,150)
2. Combined valuation payroll	29,324,337	26,946,690
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.44%)	(7.86%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	29,324,337	26,946,690
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of St Helens/2123
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of St Helens/2123

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of St Helens/2123

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of St Helens -- #2123

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of St Helens to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of St Helens.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of St Helens

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.66%	13.59%	20.12%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	2.26%	2.26%	2.26%	2.26%	2.26%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.22%	23.15%	29.68%	17.58%	22.35%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.72%	23.65%	30.18%	18.01%	22.78%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of St Helens

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,615,941	\$6,396,074
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	852,876	872,325
Allocated pooled OPSRP UAL	565,329	452,846
Side account	0	0
Net unfunded pension actuarial accrued liability	9,034,146	7,721,245
Combined valuation payroll	3,976,599	3,961,151
Net pension UAL as a percentage of payroll	227%	195%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	2.26%	2.18%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$19,309	\$31,486
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$344,800	\$60,512	17.89%	\$455,015	\$81,402
Tier 2 General Service	12.26%	1,026,741	125,878	12.44%	984,954	122,528
Total General Service		1,371,541	186,390		1,439,969	203,930
Tier 1 Police & Fire	21.37%	308,544	65,936	21.53%	395,936	85,245
Tier 2 Police & Fire	18.95%	330,170	62,567	19.00%	329,884	62,678
Total Police & Fire		638,714	128,503		725,820	147,923
Total		\$2,010,255	\$314,893		\$2,165,789	\$351,853
Employer normal cost rate						
General Service			13.59%			14.16%
Police & Fire			20.12%			20.38%
Aggregate (Default)			15.66%			16.25%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$872,325
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.79%
B. Actual employer payroll	1,964,279
C. Payment to transition liability/(surplus)	35,161
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	2.10%
B. Actual employer payroll	2,085,281
C. Payment to transition liability/(surplus)	43,791
4. Supplemental payment to transition liability	0
5. Interest	59,503
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$852,876

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	852,876	872,325
2. Combined valuation payroll	3,976,599	3,961,151
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.26%	2.18%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,976,599	3,961,151
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Stanfield Fire District/2706
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Stanfield Fire District/2706

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Stanfield Fire District/2706

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Stanfield Fire District -- #2706

September 2016

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Executive Summary

Milliman has prepared this report for Stanfield Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Stanfield Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Stanfield Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.36%	14.81%	21.36%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(143.70%)	(143.70%)	(143.70%)	(143.70%)	(143.70%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	0.00%	0.00%	0.00%	0.00%	0.00%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	0.50%	0.50%	0.50%	0.43%	0.43%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Stanfield Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$7,521	\$0
Allocated pre-SLGRP pooled liability/(surplus)	(646)	0
Transition liability/(surplus)	(53,632)	(50,368)
Allocated pooled OPSRP UAL	558	0
Side account	0	0
Net unfunded pension actuarial accrued liability	(46,199)	(50,368)
Combined valuation payroll	3,927	0
Net pension UAL as a percentage of payroll	(1,176%)	0%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(143.70%)	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$19	\$0
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	3,927	839	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		3,927	839		0	0
Total		\$3,927	\$839		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.36%			20.08%
Aggregate (Default)			21.36%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$50,368)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.79%)
B. Actual employer payroll	1,435
C. Payment to transition liability/(surplus)	(69)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.60%)
B. Actual employer payroll	7,300
C. Payment to transition liability/(surplus)	(409)
4. Supplemental payment to transition liability	0
5. Interest	(3,742)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$53,632)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(53,632)	(50,368)
2. Combined valuation payroll	3,927	0
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(143.70%)	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	3,927	0
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

State Agencies/1000
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
State Agencies/1000

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
State Agencies/1000

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

State Agencies -- #1000

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for State Agencies to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to State Agencies.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for State Agencies

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.73%	14.90%	19.89%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(7.11%)	(7.11%)	(7.11%)	(7.11%)	(7.11%)
Net pension contribution rate	17.68%	16.85%	21.84%	9.97%	14.74%
Retiree Healthcare					
Normal cost rate	0.18%	0.18%	0.18%	0.00%	0.00%
UAL rate	0.81%	0.81%	0.81%	0.81%	0.81%
Net retiree healthcare rate	0.99%	0.99%	0.99%	0.81%	0.81%
Total net employer contribution rate	18.67%	17.84%	22.83%	10.78%	15.55%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.44%	0.35%	0.35%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.49%	0.38%	0.38%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

State Agencies

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,378,285,447	\$4,352,453,482
Allocated pre-SLGRP pooled liability/(surplus)	469,944,593	486,359,847
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	399,228,524	308,156,262
Side account	1,898,222,621	2,057,985,033
Net unfunded pension actuarial accrued liability	4,349,235,943	3,088,984,558
Combined valuation payroll	2,808,226,304	2,695,516,858
Net pension UAL as a percentage of payroll	155%	115%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(7.11%)	(7.55%)
Allocated pooled RHIA UAL	\$13,635,784	\$21,425,553
Allocated pooled RHIPA UAL	\$56,134,127	\$62,789,331

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$545,445,609	\$95,725,704	17.89%	\$605,594,603	\$108,340,874
Tier 2 General Service	12.26%	549,240,746	67,336,915	12.44%	561,238,015	69,818,009
Total General Service		1,094,686,355	163,062,619		1,166,832,618	178,158,883
Tier 1 Police & Fire	21.37%	85,446,910	18,260,005	21.53%	85,446,134	18,396,553
Tier 2 Police & Fire	18.95%	135,665,952	25,708,698	19.00%	130,608,940	24,815,699
Total Police & Fire		221,112,862	43,968,703		216,055,074	43,212,252
Total		\$1,315,799,217	\$207,031,322		\$1,382,887,692	\$221,371,135
Employer normal cost rate						
General Service			14.90%			15.27%
Police & Fire			19.89%			20.00%
Aggregate (Default)			15.73%			16.01%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	2,808,226,304	2,695,516,858
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$2,057,985,033	\$2,057,985,033
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(202,508,501)	(202,508,501)
5. Side account earnings during 2015		42,747,090	42,747,090
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$1,898,222,621	\$1,898,222,621

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$1,898,222,621	\$2,057,985,033
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,898,222,621	\$2,057,985,033

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$1,898,222,621	\$2,057,985,033
2. Combined valuation payroll	2,808,226,304	2,695,516,858
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(7.11%)	(7.55%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Stayton/2757
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Stayton/2757

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Stayton/2757

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Stayton -- #2757

September 2016

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Executive Summary

Milliman has prepared this report for City of Stayton to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Stayton.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Stayton

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.95%)	(0.95%)	(0.95%)	(0.95%)	(0.95%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.57%	19.43%	23.57%	12.64%	17.41%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.07%	19.93%	24.07%	13.07%	17.84%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Stayton

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,822,592	\$1,463,462
Allocated pre-SLGRP pooled liability/(surplus)	(156,437)	(162,196)
Transition liability/(surplus)	(86,000)	(88,767)
Allocated pooled OPSRP UAL	135,290	103,614
Side account	0	0
Net unfunded pension actuarial accrued liability	1,715,445	1,316,113
Combined valuation payroll	951,651	906,336
Net pension UAL as a percentage of payroll	180%	145%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.95%)	(0.97%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,621	\$7,204
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	537,232	101,805	19.00%	533,488	101,363
Total Police & Fire		537,232	101,805		533,488	101,363
Total		\$537,232	\$101,805		\$533,488	\$101,363
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$88,767)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.92%)
B. Actual employer payroll	444,435
C. Payment to transition liability/(surplus)	(4,089)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.01%)
B. Actual employer payroll	463,177
C. Payment to transition liability/(surplus)	(4,678)
4. Supplemental payment to transition liability	0
5. Interest	(6,000)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$86,000)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(86,000)	(88,767)
2. Combined valuation payroll	951,651	906,336
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.95%)	(0.97%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	951,651	906,336
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Stayton Fire District/2696
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Stayton Fire District/2696

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Stayton Fire District/2696

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Stayton Fire District -- #2696

September 2016

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Executive Summary

Milliman has prepared this report for Stayton Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Stayton Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Stayton Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.28%	12.26%	19.49%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.63%)	(1.63%)	(1.63%)	(1.63%)	(1.63%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.95%	17.93%	25.16%	13.69%	18.46%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.45%	18.43%	25.66%	14.12%	18.89%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Stayton Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$869,546	\$768,423
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(70,177)	(73,542)
Allocated pooled OPSRP UAL	64,546	54,405
Side account	0	0
Net unfunded pension actuarial accrued liability	863,915	749,286
Combined valuation payroll	454,026	475,892
Net pension UAL as a percentage of payroll	190%	157%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.63%)	(1.53%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,205	\$3,783
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	57,592	7,061	12.44%	55,191	6,866
Total General Service		57,592	7,061		55,191	6,866
Tier 1 Police & Fire	21.37%	64,191	13,718	21.53%	58,297	12,551
Tier 2 Police & Fire	18.95%	221,290	41,934	19.00%	201,929	38,367
Total Police & Fire		285,481	55,652		260,226	50,918
Total		\$343,073	\$62,713		\$315,417	\$57,784
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.49%			19.57%
Aggregate (Default)			18.28%			18.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$73,542)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.87%)
B. Actual employer payroll	231,141
C. Payment to transition liability/(surplus)	(4,322)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.55%)
B. Actual employer payroll	254,129
C. Payment to transition liability/(surplus)	(3,939)
4. Supplemental payment to transition liability	0
5. Interest	(4,896)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$70,177)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(70,177)	(73,542)
2. Combined valuation payroll	454,026	475,892
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.63%)	(1.53%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	454,026	475,892
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sublimity Fire District/2799
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sublimity Fire District/2799

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sublimity Fire District/2799

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sublimity Fire District -- #2799

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Sublimity Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sublimity Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sublimity Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(10.51%)	(10.51%)	(10.51%)	(10.51%)	(10.51%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	9.05%	9.05%	16.73%	4.81%	9.58%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	9.55%	9.55%	17.23%	5.24%	10.01%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sublimity Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$206,036	\$162,466
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(107,472)	(105,871)
Allocated pooled OPSRP UAL	15,294	11,503
Side account	0	0
Net unfunded pension actuarial accrued liability	113,858	68,098
Combined valuation payroll	107,580	100,617
Net pension UAL as a percentage of payroll	106%	68%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(10.51%)	(10.40%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$522	\$800
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	34,739	4,259	12.44%	34,278	4,264
Total General Service		34,739	4,259		34,278	4,264
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$34,739	\$4,259		\$34,278	\$4,264
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$105,871)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.22%)
B. Actual employer payroll	49,109
C. Payment to transition liability/(surplus)	(3,055)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.42%)
B. Actual employer payroll	52,440
C. Payment to transition liability/(surplus)	(2,842)
4. Supplemental payment to transition liability	0
5. Interest	(7,498)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$107,472)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(107,472)	(105,871)
2. Combined valuation payroll	107,580	100,617
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.51%)	(10.40%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	107,580	100,617
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Suburban East Salem Water District/2641
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Suburban East Salem Water District/2641

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Suburban East Salem Water District/2641

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Suburban East Salem Water District -- #2641

September 2016

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Executive Summary

Milliman has prepared this report for Suburban East Salem Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Suburban East Salem Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Suburban East Salem Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.40%	15.40%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.30%)	(2.30%)	(2.30%)	(2.30%)	(2.30%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.40%	20.40%	24.94%	13.02%	17.79%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.90%	20.90%	25.44%	13.45%	18.22%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Suburban East Salem Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$635,207	\$517,925
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(72,427)	(74,269)
Allocated pooled OPSRP UAL	47,151	36,669
Side account	0	0
Net unfunded pension actuarial accrued liability	609,931	480,325
Combined valuation payroll	331,668	320,756
Net pension UAL as a percentage of payroll	184%	150%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.30%)	(2.29%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,610	\$2,550
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$139,184	\$24,427	17.89%	\$130,873	\$23,413
Tier 2 General Service	12.26%	95,026	11,650	12.44%	98,940	12,308
Total General Service		234,210	36,077		229,813	35,721
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$234,210	\$36,077		\$229,813	\$35,721
Employer normal cost rate						
General Service			15.40%			15.54%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.40%			15.54%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$74,269)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.10%)
B. Actual employer payroll	157,301
C. Payment to transition liability/(surplus)	(3,303)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.24%)
B. Actual employer payroll	160,338
C. Payment to transition liability/(surplus)	(3,592)
4. Supplemental payment to transition liability	0
5. Interest	(5,053)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$72,427)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(72,427)	(74,269)
2. Combined valuation payroll	331,668	320,756
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.30%)	(2.29%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	331,668	320,756
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sunriver Service District/2857
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sunriver Service District/2857

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sunriver Service District/2857

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sunriver Service District -- #2857

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Sunriver Service District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sunriver Service District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sunriver Service District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.81%	12.26%	19.16%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(8.77%)	(8.77%)	(8.77%)	(8.77%)	(8.77%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.34%	10.79%	17.69%	6.55%	11.32%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.84%	11.29%	18.19%	6.98%	11.75%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sunriver Service District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,428,019	\$3,086,883
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(1,492,458)	(1,515,798)
Allocated pooled OPSRP UAL	254,461	218,553
Side account	0	0
Net unfunded pension actuarial accrued liability	2,190,022	1,789,638
Combined valuation payroll	1,789,911	1,911,737
Net pension UAL as a percentage of payroll	122%	94%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(8.77%)	(7.84%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$8,691	\$15,196
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	57,092	6,999	12.44%	123,817	15,403
Total General Service		57,092	6,999		123,817	15,403
Tier 1 Police & Fire	21.37%	93,756	20,036	21.53%	104,107	22,414
Tier 2 Police & Fire	18.95%	986,935	187,024	19.00%	1,125,055	213,760
Total Police & Fire		1,080,691	207,060		1,229,162	236,174
Total		\$1,137,783	\$214,059		\$1,352,979	\$251,577
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.16%			19.21%
Aggregate (Default)			18.81%			18.59%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,515,798)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.50%)
B. Actual employer payroll	854,456
C. Payment to transition liability/(surplus)	(55,540)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.35%)
B. Actual employer payroll	978,587
C. Payment to transition liability/(surplus)	(71,925)
4. Supplemental payment to transition liability	0
5. Interest	(104,125)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,492,458)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,492,458)	(1,515,798)
2. Combined valuation payroll	1,789,911	1,911,737
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(8.77%)	(7.84%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,789,911	1,911,737
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Sutherlin/2217

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Sutherlin/2217

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Sutherlin/2217

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Sutherlin -- #2217

September 2016

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Executive Summary

Milliman has prepared this report for City of Sutherlin to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Sutherlin.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Sutherlin

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.45%	15.21%	19.72%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(9.10%)	(9.10%)	(9.10%)	(9.10%)	(9.10%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.92%	11.68%	16.19%	4.49%	9.26%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.42%	12.18%	16.69%	4.92%	9.69%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Sutherlin

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,824,921	\$3,361,651
Allocated pre-SLGRP pooled liability/(surplus)	(328,302)	(372,573)
Transition liability/(surplus)	(1,727,909)	(1,760,275)
Allocated pooled OPSRP UAL	283,923	238,007
Side account	0	0
Net unfunded pension actuarial accrued liability	2,052,633	1,466,810
Combined valuation payroll	1,997,150	2,081,903
Net pension UAL as a percentage of payroll	103%	70%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(9.10%)	(8.36%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,697	\$16,548
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$347,775	\$61,035	17.89%	\$437,915	\$78,343
Tier 2 General Service	12.26%	276,757	33,930	12.44%	303,684	37,778
Total General Service		624,532	94,965		741,599	116,121
Tier 1 Police & Fire	21.37%	75,264	16,084	21.53%	70,149	15,103
Tier 2 Police & Fire	18.95%	161,846	30,670	19.00%	222,584	42,291
Total Police & Fire		237,110	46,754		292,733	57,394
Total		\$861,642	\$141,719		\$1,034,332	\$173,515
Employer normal cost rate						
General Service			15.21%			15.66%
Police & Fire			19.72%			19.61%
Aggregate (Default)			16.45%			16.78%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,760,275)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.18%)
B. Actual employer payroll	1,026,648
C. Payment to transition liability/(surplus)	(73,713)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.87%)
B. Actual employer payroll	1,006,404
C. Payment to transition liability/(surplus)	(79,205)
4. Supplemental payment to transition liability	0
5. Interest	(120,552)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,727,909)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,727,909)	(1,760,275)
2. Combined valuation payroll	1,997,150	2,081,903
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.10%)	(8.36%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,997,150	2,081,903
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sutherlin Water Control District/2810
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sutherlin Water Control District/2810

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sutherlin Water Control District/2810

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sutherlin Water Control District -- #2810

September 2016

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Executive Summary

Milliman has prepared this report for Sutherlin Water Control District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sutherlin Water Control District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sutherlin Water Control District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.56%)	(1.56%)	(1.56%)	(1.56%)	(1.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.79%	18.82%	23.95%	12.03%	16.80%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.29%	19.32%	24.45%	12.46%	17.23%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sutherlin Water Control District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$112,383	\$90,060
Allocated pre-SLGRP pooled liability/(surplus)	(9,646)	(9,981)
Transition liability/(surplus)	(8,676)	(8,983)
Allocated pooled OPSRP UAL	8,342	6,376
Side account	0	0
Net unfunded pension actuarial accrued liability	102,403	77,472
Combined valuation payroll	58,680	55,775
Net pension UAL as a percentage of payroll	175%	139%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.56%)	(1.59%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$285	\$443
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$8,983)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.64%)
B. Actual employer payroll	27,255
C. Payment to transition liability/(surplus)	(447)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.61%)
B. Actual employer payroll	28,855
C. Payment to transition liability/(surplus)	(465)
4. Supplemental payment to transition liability	0
5. Interest	(605)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$8,676)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(8,676)	(8,983)
2. Combined valuation payroll	58,680	55,775
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.56%)	(1.59%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	58,680	55,775
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Sweet Home Fire and Ambulance District/2847
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Sweet Home Fire and Ambulance District/2847

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Sweet Home Fire and Ambulance District/2847

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Sweet Home Fire and Ambulance District -- #2847

September 2016

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Executive Summary

Milliman has prepared this report for Sweet Home Fire and Ambulance District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Sweet Home Fire and Ambulance District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Sweet Home Fire and Ambulance District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.40%	14.81%	20.40%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.89%)	(0.89%)	(0.89%)	(0.89%)	(0.89%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.08%	19.49%	25.08%	12.70%	17.47%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.58%	19.99%	25.58%	13.13%	17.90%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Sweet Home Fire and Ambulance District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,908,050	\$1,382,882
Allocated pre-SLGRP pooled liability/(surplus)	(163,772)	(153,265)
Transition liability/(surplus)	(84,148)	(87,439)
Allocated pooled OPSRP UAL	141,634	97,909
Side account	0	0
Net unfunded pension actuarial accrued liability	1,801,764	1,240,087
Combined valuation payroll	996,272	856,432
Net pension UAL as a percentage of payroll	181%	145%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.89%)	(1.01%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,838	\$6,807
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	255,146	54,525	21.53%	261,137	56,223
Tier 2 Police & Fire	18.95%	172,077	32,609	19.00%	171,471	32,579
Total Police & Fire		427,223	87,134		432,608	88,802
Total		\$427,223	\$87,134		\$432,608	\$88,802
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.40%			20.53%
Aggregate (Default)			20.40%			20.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$87,439)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.95%)
B. Actual employer payroll	433,911
C. Payment to transition liability/(surplus)	(4,122)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.06%)
B. Actual employer payroll	475,406
C. Payment to transition liability/(surplus)	(5,040)
4. Supplemental payment to transition liability	0
5. Interest	(5,871)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$84,148)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(84,148)	(87,439)
2. Combined valuation payroll	996,272	856,432
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.89%)	(1.01%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	996,272	856,432
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Talent/2188

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Talent/2188

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Talent/2188

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Talent -- #2188

September 2016

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Executive Summary

Milliman has prepared this report for City of Talent to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Talent.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Talent

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.32%	16.49%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.87%)	(5.87%)	(5.87%)	(5.87%)	(5.87%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.75%	17.92%	20.38%	9.45%	14.22%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.25%	18.42%	20.88%	9.88%	14.65%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Talent

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,524,202	\$1,950,772
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(735,008)	(773,357)
Allocated pooled OPSRP UAL	187,371	138,116
Side account	0	0
Net unfunded pension actuarial accrued liability	1,976,565	1,315,531
Combined valuation payroll	1,317,991	1,208,132
Net pension UAL as a percentage of payroll	150%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.87%)	(6.33%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,400	\$9,603
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$226,749	\$39,794	17.89%	\$215,508	\$38,554
Tier 2 General Service	12.26%	56,816	6,966	12.44%	55,603	6,917
Total General Service		283,565	46,760		271,111	45,471
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	143,452	27,184	19.00%	136,734	25,979
Total Police & Fire		143,452	27,184		136,734	25,979
Total		\$427,017	\$73,944		\$407,845	\$71,450
Employer normal cost rate						
General Service			16.49%			16.77%
Police & Fire			18.95%			19.00%
Aggregate (Default)			17.32%			17.52%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$773,357)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.66%)
B. Actual employer payroll	583,181
C. Payment to transition liability/(surplus)	(44,672)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.80%)
B. Actual employer payroll	661,139
C. Payment to transition liability/(surplus)	(44,957)
4. Supplemental payment to transition liability	0
5. Interest	(51,280)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$735,008)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(735,008)	(773,357)
2. Combined valuation payroll	1,317,991	1,208,132
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.87%)	(6.33%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,317,991	1,208,132
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Talent Irrigation District/2582
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Talent Irrigation District/2582

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Talent Irrigation District/2582

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Talent Irrigation District -- #2582

September 2016

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Executive Summary

Milliman has prepared this report for Talent Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Talent Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Talent Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.54%	16.54%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.21%	1.21%	1.21%	1.21%	1.21%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.32%	23.32%	26.72%	14.80%	19.57%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.82%	23.82%	27.22%	15.23%	20.00%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Talent Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,084,332	\$848,170
Allocated pre-SLGRP pooled liability/(surplus)	(93,071)	(94,003)
Transition liability/(surplus)	64,983	67,325
Allocated pooled OPSRP UAL	80,490	60,051
Side account	0	0
Net unfunded pension actuarial accrued liability	1,136,734	881,543
Combined valuation payroll	566,175	525,280
Net pension UAL as a percentage of payroll	201%	168%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.21%	1.27%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,749	\$4,175
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$385,922	\$67,729	17.89%	\$374,316	\$66,965
Tier 2 General Service	12.26%	91,104	11,169	12.44%	88,359	10,992
Total General Service		477,026	78,898		462,675	77,957
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$477,026	\$78,898		\$462,675	\$77,957
Employer normal cost rate						
General Service			16.54%			16.85%
Police & Fire			19.94%			20.08%
Aggregate (Default)			16.54%			16.85%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$67,325
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.35%
B. Actual employer payroll	267,576
C. Payment to transition liability/(surplus)	3,612
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.17%
B. Actual employer payroll	278,939
C. Payment to transition liability/(surplus)	3,264
4. Supplemental payment to transition liability	0
5. Interest	4,534
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$64,983

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	64,983	67,325
2. Combined valuation payroll	566,175	525,280
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.21%	1.27%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	566,175	525,280
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tangent Rural Fire Protection District/2553
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tangent Rural Fire Protection District/2553

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tangent Rural Fire Protection District/2553

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tangent Rural Fire Protection District -- #2553

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Tangent Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tangent Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tangent Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.33%	14.81%	21.33%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	12.63%	12.63%	12.63%	12.63%	12.63%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	41.26%	34.74%	41.26%	27.95%	32.72%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	41.76%	35.24%	41.76%	28.38%	33.15%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tangent Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$287,956	\$234,679
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	224,499	227,211
Allocated pooled OPSRP UAL	21,375	16,615
Side account	0	0
Net unfunded pension actuarial accrued liability	533,830	478,505
Combined valuation payroll	150,354	145,339
Net pension UAL as a percentage of payroll	355%	329%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	12.63%	12.66%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$730	\$1,155
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	6,577	1,406	21.53%	6,945	1,495
Tier 2 Police & Fire	18.95%	121	23	19.00%	0	0
Total Police & Fire		6,698	1,429		6,945	1,495
Total		\$6,698	\$1,429		\$6,945	\$1,495
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.33%			21.53%
Aggregate (Default)			21.33%			21.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$227,211
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	13.00%
B. Actual employer payroll	69,787
C. Payment to transition liability/(surplus)	9,072
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	13.00%
B. Actual employer payroll	71,559
C. Payment to transition liability/(surplus)	9,303
4. Supplemental payment to transition liability	0
5. Interest	15,663
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$224,499

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	224,499	227,211
2. Combined valuation payroll	150,354	145,339
3. Regular amortization factor	11.826	12.353
4. Total transition liability/(surplus) rate	12.63%	12.66%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	150,354	145,339
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

The Oregon Consortium/2652
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
The Oregon Consortium/2652

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
The Oregon Consortium/2652

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

The Oregon Consortium -- #2652

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for The Oregon Consortium to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to The Oregon Consortium.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for The Oregon Consortium

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	24.85%	24.85%	27.24%	15.32%	20.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.35%	25.35%	27.74%	15.75%	20.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

The Oregon Consortium

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$369,047	\$453,209
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	87,808
Allocated pooled OPSRP UAL	27,394	32,087
Side account	0	0
Net unfunded pension actuarial accrued liability	396,441	573,104
Combined valuation payroll	192,695	280,677
Net pension UAL as a percentage of payroll	206%	204%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	3.09%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$936	\$2,231
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$80,771	\$14,175	17.89%	\$108,902	\$19,483
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		80,771	14,175		108,902	19,483
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$80,771	\$14,175		\$108,902	\$19,483
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$87,808
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.31%
B. Actual employer payroll	123,221
C. Payment to transition liability/(surplus)	2,846
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	101,737
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	88,300
5. Interest	3,338
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	87,808
2. Combined valuation payroll	192,695	280,677
3. Regular amortization factor	0.000	10.118
4. Total transition liability/(surplus) rate	0.00%	3.09%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	192,695	280,677
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Tigard/2295
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Tigard/2295

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Tigard/2295

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Tigard -- #2295

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Tigard to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Tigard.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Tigard

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.84%	14.81%	19.84%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.40%)	(5.40%)	(5.40%)	(5.40%)	(5.40%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.01%	14.98%	20.01%	8.19%	12.96%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.51%	15.48%	20.51%	8.62%	13.39%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Tigard

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$11,864,945	\$9,565,567
Allocated pre-SLGRP pooled liability/(surplus)	(1,018,395)	(1,060,155)
Transition liability/(surplus)	(3,181,057)	(3,266,857)
Allocated pooled OPSRP UAL	880,731	677,248
Side account	0	0
Net unfunded pension actuarial accrued liability	8,546,224	5,915,803
Combined valuation payroll	6,195,181	5,924,049
Net pension UAL as a percentage of payroll	138%	100%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.40%)	(5.45%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$30,082	\$47,088
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	1,253,886	267,955	21.53%	1,201,391	258,659
Tier 2 Police & Fire	18.95%	2,169,855	411,188	19.00%	2,097,546	398,534
Total Police & Fire		3,423,741	679,143		3,298,937	657,193
Total		\$3,423,741	\$679,143		\$3,298,937	\$657,193
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.84%			19.92%
Aggregate (Default)			19.84%			19.92%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,266,857)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.02%)
B. Actual employer payroll	2,962,927
C. Payment to transition liability/(surplus)	(148,739)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.20%)
B. Actual employer payroll	3,057,599
C. Payment to transition liability/(surplus)	(158,995)
4. Supplemental payment to transition liability	0
5. Interest	(221,934)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,181,057)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,181,057)	(3,266,857)
2. Combined valuation payroll	6,195,181	5,924,049
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.40%)	(5.45%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,195,181	5,924,049
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Tillamook/2128
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Tillamook/2128

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Tillamook/2128

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Tillamook -- #2128

September 2016

Secondary Employers

2755 Tillamook Water Commission

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Executive Summary

Milliman has prepared this report for City of Tillamook to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Tillamook.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Tillamook

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.76%	14.00%	19.78%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.48%)	(3.48%)	(3.48%)	(3.48%)	(3.48%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.58%	17.82%	23.60%	11.84%	16.61%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.08%	18.32%	24.10%	12.27%	17.04%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Tillamook

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,674,954	\$2,849,217
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(634,081)	(657,020)
Allocated pooled OPSRP UAL	272,791	201,726
Side account	0	0
Net unfunded pension actuarial accrued liability	3,313,664	2,393,923
Combined valuation payroll	1,918,846	1,764,548
Net pension UAL as a percentage of payroll	173%	136%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.48%)	(3.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,317	\$14,026
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$212,107	\$37,225	17.89%	\$201,355	\$36,022
Tier 2 General Service	12.26%	430,908	52,829	12.44%	447,842	55,712
Total General Service		643,015	90,054		649,197	91,734
Tier 1 Police & Fire	21.37%	96,359	20,592	21.53%	100,164	21,565
Tier 2 Police & Fire	18.95%	184,296	34,924	19.00%	182,817	34,735
Total Police & Fire		280,655	55,516		282,981	56,300
Total		\$923,670	\$145,570		\$932,178	\$148,034
Employer normal cost rate						
General Service			14.00%			14.13%
Police & Fire			19.78%			19.90%
Aggregate (Default)			15.76%			15.88%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$657,020)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.09%)
B. Actual employer payroll	869,626
C. Payment to transition liability/(surplus)	(35,568)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.46%)
B. Actual employer payroll	913,562
C. Payment to transition liability/(surplus)	(31,609)
4. Supplemental payment to transition liability	0
5. Interest	(44,238)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$634,081)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(634,081)	(657,020)
2. Combined valuation payroll	1,918,846	1,764,548
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.48%)	(3.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,918,846	1,764,548
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tillamook Bay Community College/2997
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tillamook Bay Community College/2997

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tillamook Bay Community College/2997

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tillamook Bay Community College -- #2997

September 2016

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Executive Summary

Milliman has prepared this report for Tillamook Bay Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tillamook Bay Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tillamook Bay Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(8.32%)	(8.32%)	(8.32%)	(8.32%)	(8.32%)
Net pension contribution rate	15.27%	15.27%	20.68%	8.76%	13.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.77%	15.77%	21.18%	9.19%	13.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tillamook Bay Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,204,177	\$2,563,614
Allocated pre-SLGRP pooled liability/(surplus)	279,975	286,468
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	237,845	181,505
Side account	1,323,237	1,444,489
Net unfunded pension actuarial accrued liability	2,398,760	1,587,098
Combined valuation payroll	1,673,034	1,587,671
Net pension UAL as a percentage of payroll	143%	100%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(8.32%)	(8.99%)
Allocated pooled RHIA UAL	\$8,124	\$12,620
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$1,444,489	\$1,444,489
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(150,234)	(150,234)
5. Side account earnings during 2015		29,982	29,982
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$1,323,237	\$1,323,237

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$1,323,237	\$1,444,489
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,323,237	\$1,444,489

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$1,323,237	\$1,444,489
2. Combined valuation payroll	1,673,034	1,587,671
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(8.32%)	(8.99%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tillamook Peoples Utility District/2626
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tillamook Peoples Utility District/2626

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tillamook Peoples Utility District/2626

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tillamook Peoples Utility District -- #2626

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Tillamook Peoples Utility District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tillamook Peoples Utility District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tillamook Peoples Utility District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.34%	15.34%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(0.22%)	(0.22%)	(0.22%)	(0.22%)	(0.22%)
Net pension contribution rate	20.69%	20.69%	25.29%	13.37%	18.14%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.19%	21.19%	25.79%	13.80%	18.57%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tillamook Peoples Utility District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$14,997,247	\$11,677,833
Allocated pre-SLGRP pooled liability/(surplus)	(1,287,248)	(1,294,258)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,113,241	826,797
Side account	164,864	177,158
Net unfunded pension actuarial accrued liability	14,658,376	11,033,214
Combined valuation payroll	7,830,686	7,232,196
Net pension UAL as a percentage of payroll	187%	153%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	(0.22%)	(0.24%)
Allocated pooled RHIA UAL	\$38,023	\$57,486
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,056,108	\$360,847	17.89%	\$2,135,078	\$381,965
Tier 2 General Service	12.26%	1,469,723	180,188	12.44%	1,482,582	184,433
Total General Service		3,525,831	541,035		3,617,660	566,398
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$3,525,831	\$541,035		\$3,617,660	\$566,398
Employer normal cost rate						
General Service			15.34%			15.66%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.34%			15.66%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	7,830,686	7,232,196
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$177,158	\$177,158
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(14,972)	(14,972)
5. Side account earnings during 2015		3,678	3,678
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$164,864	\$164,864

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$164,864	\$177,158
Side Account 2	0	0
Side Account 3	0	0
Total	\$164,864	\$177,158

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$164,864	\$177,158
2. Combined valuation payroll	7,830,686	7,232,196
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(0.22%)	(0.24%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Toledo/2275

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Toledo/2275

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Toledo/2275

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Toledo -- #2275

September 2016

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Executive Summary

Milliman has prepared this report for City of Toledo to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Toledo.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Toledo

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.20%	15.12%	19.73%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(9.53%)	(9.53%)	(9.53%)	(9.53%)	(9.53%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.24%	11.16%	15.77%	4.06%	8.83%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.74%	11.66%	16.27%	4.49%	9.26%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Toledo

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,128,808	\$3,293,415
Allocated pre-SLGRP pooled liability/(surplus)	(354,385)	(365,010)
Transition liability/(surplus)	(1,952,231)	(1,997,876)
Allocated pooled OPSRP UAL	306,480	233,176
Side account	0	0
Net unfunded pension actuarial accrued liability	2,128,672	1,163,705
Combined valuation payroll	2,155,822	2,039,644
Net pension UAL as a percentage of payroll	99%	57%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(9.53%)	(9.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$10,468	\$16,212
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$262,170	\$46,011	17.89%	\$380,036	\$67,988
Tier 2 General Service	12.26%	222,593	27,290	12.44%	224,703	27,953
Total General Service		484,763	73,301		604,739	95,941
Tier 1 Police & Fire	21.37%	128,406	27,440	21.53%	129,975	27,984
Tier 2 Police & Fire	18.95%	267,881	50,763	19.00%	229,232	43,554
Total Police & Fire		396,287	78,203		359,207	71,538
Total		\$881,050	\$151,504		\$963,946	\$167,479
Employer normal cost rate						
General Service			15.12%			15.86%
Police & Fire			19.73%			19.92%
Aggregate (Default)			17.20%			17.37%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,997,876)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.97%)
B. Actual employer payroll	1,007,693
C. Payment to transition liability/(surplus)	(80,313)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.95%)
B. Actual employer payroll	1,134,446
C. Payment to transition liability/(surplus)	(101,534)
4. Supplemental payment to transition liability	0
5. Interest	(136,202)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,952,231)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,952,231)	(1,997,876)
2. Combined valuation payroll	2,155,822	2,039,644
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.53%)	(9.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,155,822	2,039,644
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Town of Canyon City/2255
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Town of Canyon City/2255

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Town of Canyon City/2255

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Town of Canyon City -- #2255

September 2016

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Executive Summary

Milliman has prepared this report for Town of Canyon City to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Town of Canyon City.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Town of Canyon City

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	2.35%	2.35%	2.35%	2.35%	2.35%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.70%	22.73%	27.86%	15.94%	20.71%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.20%	23.23%	28.36%	16.37%	21.14%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Town of Canyon City

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$274,397	\$220,273
Allocated pre-SLGRP pooled liability/(surplus)	(23,552)	(24,413)
Transition liability/(surplus)	31,932	33,450
Allocated pooled OPSRP UAL	20,368	15,595
Side account	0	0
Net unfunded pension actuarial accrued liability	303,145	244,905
Combined valuation payroll	143,274	136,417
Net pension UAL as a percentage of payroll	212%	180%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	2.35%	2.42%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$696	\$1,084
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$33,450
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	2.10%
B. Actual employer payroll	66,930
C. Payment to transition liability/(surplus)	1,406
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.42%
B. Actual employer payroll	68,430
C. Payment to transition liability/(surplus)	2,340
4. Supplemental payment to transition liability	0
5. Interest	2,228
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$31,932

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	31,932	33,450
2. Combined valuation payroll	143,274	136,417
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	2.35%	2.42%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	143,274	136,417
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Town of Lakeview/2212

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Town of Lakeview/2212

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Town of Lakeview/2212

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Town of Lakeview -- #2212

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Town of Lakeview to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Town of Lakeview.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Town of Lakeview

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.39%	14.03%	20.33%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(10.24%)	(10.24%)	(10.24%)	(10.24%)	(10.24%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.72%	9.36%	15.66%	3.35%	8.12%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.22%	9.86%	16.16%	3.78%	8.55%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Town of Lakeview

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,920,876	\$1,670,440
Allocated pre-SLGRP pooled liability/(surplus)	(164,873)	(185,135)
Transition liability/(surplus)	(975,847)	(1,006,500)
Allocated pooled OPSRP UAL	142,586	118,268
Side account	0	0
Net unfunded pension actuarial accrued liability	922,742	597,073
Combined valuation payroll	1,002,969	1,034,520
Net pension UAL as a percentage of payroll	92%	58%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(10.24%)	(9.62%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,870	\$8,223
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$69,443	\$12,187	17.89%	\$131,715	\$23,564
Tier 2 General Service	12.26%	138,256	16,950	12.44%	154,315	19,197
Total General Service		207,699	29,137		286,030	42,761
Tier 1 Police & Fire	21.37%	135,250	28,903	21.53%	114,523	24,657
Tier 2 Police & Fire	18.95%	102,288	19,384	19.00%	191,914	36,464
Total Police & Fire		237,538	48,287		306,437	61,121
Total		\$445,237	\$77,424		\$592,467	\$103,882
Employer normal cost rate						
General Service			14.03%			14.95%
Police & Fire			20.33%			19.95%
Aggregate (Default)			17.39%			17.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,006,500)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.86%)
B. Actual employer payroll	481,255
C. Payment to transition liability/(surplus)	(52,046)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(9.72%)
B. Actual employer payroll	480,343
C. Payment to transition liability/(surplus)	(46,689)
4. Supplemental payment to transition liability	0
5. Interest	(68,082)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$975,847)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(975,847)	(1,006,500)
2. Combined valuation payroll	1,002,969	1,034,520
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(10.24%)	(9.62%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,002,969	1,034,520
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Treasure Valley Community College/2902
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Treasure Valley Community College/2902

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Treasure Valley Community College/2902

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Treasure Valley Community College -- #2902

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Treasure Valley Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Treasure Valley Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Treasure Valley Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(12.09%)	(12.09%)	(12.09%)	(12.09%)	(12.09%)
Net pension contribution rate	11.50%	11.50%	16.91%	4.99%	9.76%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.00%	12.00%	17.41%	5.42%	10.19%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Treasure Valley Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$19,180,596	\$16,162,844
Allocated pre-SLGRP pooled liability/(surplus)	1,675,965	1,806,098
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,423,770	1,144,339
Side account	11,507,379	12,289,696
Net unfunded pension actuarial accrued liability	10,772,952	6,823,585
Combined valuation payroll	10,014,986	10,009,807
Net pension UAL as a percentage of payroll	108%	68%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(12.09%)	(12.13%)
Allocated pooled RHIA UAL	\$48,629	\$79,564
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$12,289,696	\$12,289,696
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(1,036,347)	(1,036,347)
5. Side account earnings during 2015		255,030	255,030
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$11,507,379	\$11,507,379

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$11,507,379	\$12,289,696
Side Account 2	0	0
Side Account 3	0	0
Total	\$11,507,379	\$12,289,696

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$11,507,379	\$12,289,696
2. Combined valuation payroll	10,014,986	10,009,807
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(12.09%)	(12.13%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tri-City Water and Sanitary Authority/2864
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tri-City Water and Sanitary Authority/2864

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tri-City Water and Sanitary Authority/2864

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tri-City Water and Sanitary Authority -- #2864

September 2016

Secondary Employers

2690 Tri City Sanitary

2691 Tri City Water

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Executive Summary

Milliman has prepared this report for Tri-City Water and Sanitary Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tri-City Water and Sanitary Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tri-City Water and Sanitary Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.00%)	(2.00%)	(2.00%)	(2.00%)	(2.00%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.83%	15.83%	23.51%	11.59%	16.36%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.33%	16.33%	24.01%	12.02%	16.79%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tri-City Water and Sanitary Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$744,867	\$598,473
Allocated pre-SLGRP pooled liability/(surplus)	(63,934)	(66,329)
Transition liability/(surplus)	(74,046)	(76,282)
Allocated pooled OPSRP UAL	55,291	42,372
Side account	0	0
Net unfunded pension actuarial accrued liability	662,178	498,234
Combined valuation payroll	388,926	370,640
Net pension UAL as a percentage of payroll	170%	134%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.00%)	(2.03%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,888	\$2,946
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	68,495	8,397	12.44%	67,500	8,397
Total General Service		68,495	8,397		67,500	8,397
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$68,495	\$8,397		\$67,500	\$8,397
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$76,282)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.96%)
B. Actual employer payroll	178,636
C. Payment to transition liability/(surplus)	(3,501)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.04%)
B. Actual employer payroll	191,218
C. Payment to transition liability/(surplus)	(3,901)
4. Supplemental payment to transition liability	0
5. Interest	(5,166)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$74,046)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(74,046)	(76,282)
2. Combined valuation payroll	388,926	370,640
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.00%)	(2.03%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	388,926	370,640
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Troutdale/2237

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Troutdale/2237

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Troutdale/2237

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Troutdale -- #2237

September 2016

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Executive Summary

Milliman has prepared this report for City of Troutdale to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Troutdale.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Troutdale

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.67%	14.67%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.18%	6.18%	6.18%	6.18%	6.18%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(11.51%)	(11.51%)	(11.51%)	(11.51%)	(11.51%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	10.61%	10.61%	15.88%	3.96%	8.73%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	11.11%	11.11%	16.38%	4.39%	9.16%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Troutdale

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$4,982,063	\$7,385,790
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,844,975)	(2,857,452)
Allocated pooled OPSRP UAL	369,817	522,918
Side account	0	0
Net unfunded pension actuarial accrued liability	2,506,905	5,051,256
Combined valuation payroll	2,601,342	4,574,092
Net pension UAL as a percentage of payroll	96%	110%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(11.51%)	(6.17%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$12,631	\$36,358
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$691,744	\$121,401	17.89%	\$765,126	\$136,881
Tier 2 General Service	12.26%	827,278	101,424	12.44%	842,992	104,868
Total General Service		1,519,022	222,825		1,608,118	241,749
Tier 1 Police & Fire	21.37%	0	0	21.53%	369,724	79,602
Tier 2 Police & Fire	18.95%	0	0	19.00%	594,638	112,981
Total Police & Fire		0	0		964,362	192,583
Total		\$1,519,022	\$222,825		\$2,572,480	\$434,332
Employer normal cost rate						
General Service			14.67%			15.03%
Police & Fire			19.94%			19.97%
Aggregate (Default)			14.67%			16.88%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$2,857,452)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.83%)
B. Actual employer payroll	2,281,836
C. Payment to transition liability/(surplus)	(133,031)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.95%)
B. Actual employer payroll	1,309,795
C. Payment to transition liability/(surplus)	(77,933)
4. Supplemental payment to transition liability	0
5. Interest	(198,487)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,844,975)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,844,975)	(2,857,452)
2. Combined valuation payroll	2,601,342	4,574,092
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(11.51%)	(6.17%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,601,342	4,574,092
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Tualatin/2288
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Tualatin/2288

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Tualatin/2288

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Tualatin -- #2288

September 2016

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Executive Summary

Milliman has prepared this report for City of Tualatin to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Tualatin.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Tualatin

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.72%	13.83%	20.08%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	1.50%	1.50%	1.50%	1.50%	1.50%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.79%	20.90%	27.15%	15.09%	19.86%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	24.29%	21.40%	27.65%	15.52%	20.29%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Tualatin

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$19,711,770	\$16,834,957
Allocated pre-SLGRP pooled liability/(surplus)	(1,691,906)	(1,865,824)
Transition liability/(surplus)	1,462,875	1,508,619
Allocated pooled OPSRP UAL	1,463,199	1,191,925
Side account	0	0
Net unfunded pension actuarial accrued liability	20,945,938	17,669,677
Combined valuation payroll	10,292,334	10,426,053
Net pension UAL as a percentage of payroll	204%	169%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	1.50%	1.43%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$49,976	\$82,872
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$637,354	\$111,856	17.89%	\$618,534	\$110,656
Tier 2 General Service	12.26%	1,513,536	185,560	12.44%	1,770,603	220,263
Total General Service		2,150,890	297,416		2,389,137	330,919
Tier 1 Police & Fire	21.37%	863,354	184,499	21.53%	1,039,185	223,737
Tier 2 Police & Fire	18.95%	991,686	187,924	19.00%	988,596	187,833
Total Police & Fire		1,855,040	372,423		2,027,781	411,570
Total		\$4,005,930	\$669,839		\$4,416,918	\$742,489
Employer normal cost rate						
General Service			13.83%			13.85%
Police & Fire			20.08%			20.30%
Aggregate (Default)			16.72%			16.81%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$1,508,619
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	1.49%
B. Actual employer payroll	5,051,765
C. Payment to transition liability/(surplus)	75,271
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	1.42%
B. Actual employer payroll	5,107,948
C. Payment to transition liability/(surplus)	72,534
4. Supplemental payment to transition liability	0
5. Interest	102,061
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$1,462,875

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	1,462,875	1,508,619
2. Combined valuation payroll	10,292,334	10,426,053
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	1.50%	1.43%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	10,292,334	10,426,053
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tualatin Valley Fire & Rescue/2660
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tualatin Valley Fire & Rescue/2660

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tualatin Valley Fire & Rescue/2660

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tualatin Valley Fire & Rescue -- #2660

September 2016

Secondary Employers

2730 Tualatin Rural Fire District

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Executive Summary

Milliman has prepared this report for Tualatin Valley Fire & Rescue to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tualatin Valley Fire & Rescue.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tualatin Valley Fire & Rescue

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.51%	14.23%	19.99%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(3.54%)	(3.54%)	(3.54%)	(3.54%)	(3.54%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.54%	16.26%	22.02%	10.05%	14.82%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.04%	16.76%	22.52%	10.48%	15.25%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tualatin Valley Fire & Rescue

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$95,736,574	\$75,928,860
Allocated pre-SLGRP pooled liability/(surplus)	(8,217,289)	(8,415,222)
Transition liability/(surplus)	(16,833,926)	(17,498,954)
Allocated pooled OPSRP UAL	7,106,497	5,375,808
Side account	0	0
Net unfunded pension actuarial accrued liability	77,791,856	55,390,492
Combined valuation payroll	49,988,043	47,023,483
Net pension UAL as a percentage of payroll	156%	118%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(3.54%)	(3.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$242,725	\$373,770
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$885,475	\$155,401	17.89%	\$852,629	\$152,535
Tier 2 General Service	12.26%	1,487,993	182,428	12.44%	1,490,337	185,398
Total General Service		2,373,468	337,829		2,342,966	337,933
Tier 1 Police & Fire	21.37%	11,221,845	2,398,108	21.53%	11,085,590	2,386,728
Tier 2 Police & Fire	18.95%	14,981,961	2,839,082	19.00%	14,994,357	2,848,928
Total Police & Fire		26,203,806	5,237,190		26,079,947	5,235,656
Total		\$28,577,274	\$5,575,019		\$28,422,913	\$5,573,589
Employer normal cost rate						
General Service			14.23%			14.42%
Police & Fire			19.99%			20.08%
Aggregate (Default)			19.51%			19.61%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$17,498,954)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.73%)
B. Actual employer payroll	23,242,730
C. Payment to transition liability/(surplus)	(866,954)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.91%)
B. Actual employer payroll	24,872,994
C. Payment to transition liability/(surplus)	(972,534)
4. Supplemental payment to transition liability	0
5. Interest	(1,174,460)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$16,833,926)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(16,833,926)	(17,498,954)
2. Combined valuation payroll	49,988,043	47,023,483
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.54%)	(3.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	49,988,043	47,023,483
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tualatin Valley Irrigation District/2587
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tualatin Valley Irrigation District/2587

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tualatin Valley Irrigation District/2587

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tualatin Valley Irrigation District -- #2587

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Tualatin Valley Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tualatin Valley Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tualatin Valley Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(7.68%)	(7.68%)	(7.68%)	(7.68%)	(7.68%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	11.88%	11.88%	19.56%	7.64%	12.41%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	12.38%	12.38%	20.06%	8.07%	12.84%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tualatin Valley Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$370,717	\$359,822
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(141,275)	(141,411)
Allocated pooled OPSRP UAL	27,518	25,476
Side account	0	0
Net unfunded pension actuarial accrued liability	256,960	243,887
Combined valuation payroll	193,567	222,841
Net pension UAL as a percentage of payroll	133%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(7.68%)	(6.27%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$940	\$1,771
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	48,995	6,007	12.44%	47,247	5,878
Total General Service		48,995	6,007		47,247	5,878
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$48,995	\$6,007		\$47,247	\$5,878
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$141,411)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.47%)
B. Actual employer payroll	109,257
C. Payment to transition liability/(surplus)	(4,884)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.91%)
B. Actual employer payroll	104,025
C. Payment to transition liability/(surplus)	(5,108)
4. Supplemental payment to transition liability	0
5. Interest	(9,856)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$141,275)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(141,275)	(141,411)
2. Combined valuation payroll	193,567	222,841
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.68%)	(6.27%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	193,567	222,841
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Tualatin Valley Water District/2842
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Tualatin Valley Water District/2842

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Tualatin Valley Water District/2842

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Tualatin Valley Water District -- #2842

September 2016

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Executive Summary

Milliman has prepared this report for Tualatin Valley Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Tualatin Valley Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Tualatin Valley Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(3.26%)	(3.26%)	(3.26%)	(3.26%)	(3.26%)
Side account rate relief ²	(1.29%)	(1.29%)	(1.29%)	(1.29%)	(1.29%)
Net pension contribution rate	17.28%	17.28%	22.69%	10.77%	15.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.78%	17.78%	23.19%	11.20%	15.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Tualatin Valley Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$18,564,677	\$14,751,769
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(2,999,894)	(3,111,422)
Allocated pooled OPSRP UAL	1,378,050	1,044,434
Side account	1,185,115	1,278,694
Net unfunded pension actuarial accrued liability	15,757,718	11,406,087
Combined valuation payroll	9,693,389	9,135,914
Net pension UAL as a percentage of payroll	163%	125%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(3.26%)	(3.37%)
Side account rate relief	(1.29%)	(1.38%)
Allocated pooled RHIA UAL	\$47,068	\$72,618
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,307,594	\$404,983	17.89%	\$2,392,437	\$428,007
Tier 2 General Service	12.26%	3,067,027	376,018	12.44%	3,187,123	396,478
Total General Service		5,374,621	781,001		5,579,560	824,485
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$5,374,621	\$781,001		\$5,579,560	\$824,485
Employer normal cost rate						
General Service			14.53%			14.78%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.78%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,111,422)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.61%)
B. Actual employer payroll	4,503,662
C. Payment to transition liability/(surplus)	(162,582)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.33%)
B. Actual employer payroll	4,751,961
C. Payment to transition liability/(surplus)	(158,241)
4. Supplemental payment to transition liability	0
5. Interest	(209,295)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$2,999,894)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(2,999,894)	(3,111,422)
2. Combined valuation payroll	9,693,389	9,135,914
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(3.26%)	(3.37%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$1,278,694	\$1,278,694
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(119,071)	(119,071)
5. Side account earnings during 2015		26,493	26,493
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$1,185,115	\$1,185,115

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$1,185,115	\$1,278,694
Side Account 2	0	0
Side Account 3	0	0
Total	\$1,185,115	\$1,278,694

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$1,185,115	\$1,278,694
2. Combined valuation payroll	9,693,389	9,135,914
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(1.29%)	(1.38%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Turner/2228
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Turner/2228

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Turner/2228

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Turner -- #2228

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Turner to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Turner.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Turner

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.13%	12.26%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(0.76%)	(0.76%)	(0.76%)	(0.76%)	(0.76%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.67%	18.80%	25.49%	14.56%	19.33%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.17%	19.30%	25.99%	14.99%	19.76%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Turner

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$639,809	\$588,278
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(24,141)	(24,985)
Allocated pooled OPSRP UAL	47,493	41,650
Side account	0	0
Net unfunded pension actuarial accrued liability	663,161	604,943
Combined valuation payroll	334,071	364,326
Net pension UAL as a percentage of payroll	199%	166%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(0.76%)	(0.68%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,622	\$2,896
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	145,680	17,860	12.44%	142,381	17,712
Total General Service		145,680	17,860		142,381	17,712
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	109,576	20,765	19.00%	104,857	19,923
Total Police & Fire		109,576	20,765		104,857	19,923
Total		\$255,256	\$38,625		\$247,238	\$37,635
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			18.95%			19.00%
Aggregate (Default)			15.13%			15.22%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$24,985)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.66%)
B. Actual employer payroll	175,161
C. Payment to transition liability/(surplus)	(1,156)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.77%)
B. Actual employer payroll	178,207
C. Payment to transition liability/(surplus)	(1,372)
4. Supplemental payment to transition liability	0
5. Interest	(1,684)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$24,141)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(24,141)	(24,985)
2. Combined valuation payroll	334,071	364,326
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.76%)	(0.68%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	334,071	364,326
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Umatilla/2175
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Umatilla/2175

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Umatilla/2175

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Umatilla -- #2175

September 2016

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Executive Summary

Milliman has prepared this report for City of Umatilla to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Umatilla.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Umatilla

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.76%	13.93%	20.49%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(8.41%)	(8.41%)	(8.41%)	(8.41%)	(8.41%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	12.92%	11.09%	17.65%	5.18%	9.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.42%	11.59%	18.15%	5.61%	10.38%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Umatilla

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$3,596,509	\$2,898,556
Allocated pre-SLGRP pooled liability/(surplus)	(308,697)	(321,248)
Transition liability/(surplus)	(1,500,258)	(1,557,283)
Allocated pooled OPSRP UAL	266,968	205,219
Side account	0	0
Net unfunded pension actuarial accrued liability	2,054,522	1,225,244
Combined valuation payroll	1,877,887	1,795,104
Net pension UAL as a percentage of payroll	109%	68%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(8.41%)	(8.57%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$9,118	\$14,269
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$191,309	\$33,575	17.89%	\$172,039	\$30,778
Tier 2 General Service	12.26%	414,586	50,828	12.44%	368,763	45,874
Total General Service		605,895	84,403		540,802	76,652
Tier 1 Police & Fire	21.37%	150,009	32,057	21.53%	152,428	32,818
Tier 2 Police & Fire	18.95%	84,987	16,105	19.00%	81,707	15,524
Total Police & Fire		234,996	48,162		234,135	48,342
Total		\$840,891	\$132,565		\$774,937	\$124,994
Employer normal cost rate						
General Service			13.93%			14.17%
Police & Fire			20.49%			20.65%
Aggregate (Default)			15.76%			16.13%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,557,283)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(9.42%)
B. Actual employer payroll	889,124
C. Payment to transition liability/(surplus)	(83,755)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.75%)
B. Actual employer payroll	890,724
C. Payment to transition liability/(surplus)	(77,939)
4. Supplemental payment to transition liability	0
5. Interest	(104,669)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,500,258)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,500,258)	(1,557,283)
2. Combined valuation payroll	1,877,887	1,795,104
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(8.41%)	(8.57%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,877,887	1,795,104
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Umatilla County Soil & Water District/2772
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Umatilla County Soil & Water District/2772

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Umatilla County Soil & Water District/2772

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Umatilla County Soil & Water District -- #2772

September 2016

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Executive Summary

Milliman has prepared this report for Umatilla County Soil & Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Umatilla County Soil & Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Umatilla County Soil & Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.87%)	(5.87%)	(5.87%)	(5.87%)	(5.87%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.48%	14.51%	19.64%	7.72%	12.49%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.98%	15.01%	20.14%	8.15%	12.92%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Umatilla County Soil & Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$132,368	\$185,095
Allocated pre-SLGRP pooled liability/(surplus)	(11,361)	(20,514)
Transition liability/(surplus)	(38,568)	(40,442)
Allocated pooled OPSRP UAL	9,826	13,105
Side account	0	0
Net unfunded pension actuarial accrued liability	92,265	137,244
Combined valuation payroll	69,115	114,631
Net pension UAL as a percentage of payroll	133%	120%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.87%)	(3.49%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$336	\$911
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$40,442)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.42%)
B. Actual employer payroll	53,656
C. Payment to transition liability/(surplus)	(2,908)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.17%)
B. Actual employer payroll	39,721
C. Payment to transition liability/(surplus)	(1,657)
4. Supplemental payment to transition liability	0
5. Interest	(2,691)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$38,568)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(38,568)	(40,442)
2. Combined valuation payroll	69,115	114,631
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.87%)	(3.49%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	69,115	114,631
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Umatilla County Special Library District/2732
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Umatilla County Special Library District/2732

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Umatilla County Special Library District/2732

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Umatilla County Special Library District -- #2732

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Umatilla County Special Library District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Umatilla County Special Library District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Umatilla County Special Library District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(8.27%)	(8.27%)	(8.27%)	(8.27%)	(8.27%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.58%	16.58%	18.97%	7.05%	11.82%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.08%	17.08%	19.47%	7.48%	12.25%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Umatilla County Special Library District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$323,521	\$202,059
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(132,745)	(137,040)
Allocated pooled OPSRP UAL	24,015	14,306
Side account	0	0
Net unfunded pension actuarial accrued liability	214,791	79,325
Combined valuation payroll	168,924	125,137
Net pension UAL as a percentage of payroll	127%	63%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(8.27%)	(10.82%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$820	\$995
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$107,115	\$18,799	17.89%	\$43,413	\$7,767
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		107,115	18,799		43,413	7,767
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$107,115	\$18,799		\$43,413	\$7,767
Employer normal cost rate						
General Service			17.55%			17.89%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			17.89%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$137,040)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.87%)
B. Actual employer payroll	59,065
C. Payment to transition liability/(surplus)	(5,239)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(10.34%)
B. Actual employer payroll	80,429
C. Payment to transition liability/(surplus)	(8,317)
4. Supplemental payment to transition liability	0
5. Interest	(9,261)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$132,745)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(132,745)	(137,040)
2. Combined valuation payroll	168,924	125,137
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(8.27%)	(10.82%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	168,924	125,137
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Umatilla County/2013
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Umatilla County/2013

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Umatilla County/2013

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Umatilla County -- #2013

September 2016

Secondary Employers

2048 Umatilla County Fair Board

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Executive Summary

Milliman has prepared this report for Umatilla County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Umatilla County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Umatilla County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.28%	14.80%	19.66%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(6.41%)	(6.41%)	(6.41%)	(6.41%)	(6.41%)
Net pension contribution rate	15.44%	13.96%	18.82%	7.18%	11.95%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.94%	14.46%	19.32%	7.61%	12.38%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Umatilla County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$28,796,823	\$22,358,529
Allocated pre-SLGRP pooled liability/(surplus)	(2,471,697)	(2,478,003)
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	2,137,580	1,582,997
Side account	9,159,025	9,846,469
Net unfunded pension actuarial accrued liability	19,303,681	11,617,054
Combined valuation payroll	15,036,018	13,846,855
Net pension UAL as a percentage of payroll	128%	84%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.00%	0.00%
Side account rate relief	(6.41%)	(7.03%)
Allocated pooled RHIA UAL	\$73,010	\$110,063
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,385,626	\$418,677	17.89%	\$2,526,053	\$451,911
Tier 2 General Service	12.26%	2,582,025	316,556	12.44%	2,434,890	302,900
Total General Service		4,967,651	735,233		4,960,943	754,811
Tier 1 Police & Fire	21.37%	639,132	136,583	21.53%	751,237	161,741
Tier 2 Police & Fire	18.95%	1,539,702	291,774	19.00%	1,573,049	298,879
Total Police & Fire		2,178,834	428,357		2,324,286	460,620
Total		\$7,146,485	\$1,163,590		\$7,285,229	\$1,215,431
Employer normal cost rate						
General Service			14.80%			15.22%
Police & Fire			19.66%			19.82%
Aggregate (Default)			16.28%			16.68%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	15,036,018	13,846,855
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$9,846,469	\$9,846,469
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(890,943)	(890,943)
5. Side account earnings during 2015		204,499	204,499
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$9,159,025	\$9,159,025

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$9,159,025	\$9,846,469
Side Account 2	0	0
Side Account 3	0	0
Total	\$9,159,025	\$9,846,469

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$9,159,025	\$9,846,469
2. Combined valuation payroll	15,036,018	13,846,855
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(6.41%)	(7.03%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Umatilla Fire Department/2653
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Umatilla Fire Department/2653

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Umatilla Fire Department/2653

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Umatilla Fire Department -- #2653

September 2016

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Executive Summary

Milliman has prepared this report for Umatilla Fire Department to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Umatilla Fire Department.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Umatilla Fire Department

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	21.37%	14.81%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.21%)	(5.21%)	(5.21%)	(5.21%)	(5.21%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.46%	16.90%	23.46%	10.11%	14.88%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.96%	17.40%	23.96%	10.54%	15.31%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Umatilla Fire Department

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$251,620	\$216,980
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(65,073)	(68,969)
Allocated pooled OPSRP UAL	18,678	15,362
Side account	0	0
Net unfunded pension actuarial accrued liability	205,225	163,373
Combined valuation payroll	131,381	134,378
Net pension UAL as a percentage of payroll	156%	122%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.21%)	(5.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$638	\$1,068
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	84,296	18,014	21.53%	83,050	17,881
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		84,296	18,014		83,050	17,881
Total		\$84,296	\$18,014		\$83,050	\$17,881
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			21.37%			21.53%
Aggregate (Default)			21.37%			21.53%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$68,969)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(7.64%)
B. Actual employer payroll	64,610
C. Payment to transition liability/(surplus)	(4,936)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.19%)
B. Actual employer payroll	67,439
C. Payment to transition liability/(surplus)	(3,500)
4. Supplemental payment to transition liability	0
5. Interest	(4,540)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$65,073)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(65,073)	(68,969)
2. Combined valuation payroll	131,381	134,378
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.21%)	(5.07%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	131,381	134,378
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Umpqua Community College/2903
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Umpqua Community College/2903

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Umpqua Community College/2903

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Umpqua Community College -- #2903

September 2016

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Executive Summary

Milliman has prepared this report for Umpqua Community College to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Umpqua Community College.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Umpqua Community College

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.53%	14.53%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	1.76%	1.76%	1.76%	1.76%	1.76%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	(8.54%)	(8.54%)	(8.54%)	(8.54%)	(8.54%)
Net pension contribution rate	15.05%	15.05%	20.46%	8.54%	13.31%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.55%	15.55%	20.96%	8.97%	13.74%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Umpqua Community College

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$23,134,801	\$19,848,638
Allocated pre-SLGRP pooled liability/(surplus)	2,021,476	2,217,963
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	1,717,289	1,405,295
Side account	9,800,770	10,452,604
Net unfunded pension actuarial accrued liability	17,072,796	13,019,292
Combined valuation payroll	12,079,641	12,292,455
Net pension UAL as a percentage of payroll	141%	106%
Pre-SLGRP pooled rate	1.76%	1.78%
Transition rate	0.00%	0.00%
Side account rate relief	(8.54%)	(8.40%)
Allocated pooled RHIA UAL	\$58,655	\$97,708
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,957,159	\$14,558,981	17.89%	\$94,701,078	\$16,942,023
Tier 2 General Service	12.26%	109,963,960	13,481,581	12.44%	115,090,395	14,317,245
Total General Service		192,921,119	28,040,562		209,791,473	31,259,268
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$192,921,119	\$28,040,562		\$209,791,473	\$31,259,268
Employer normal cost rate						
General Service			14.53%			14.90%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.53%			14.90%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	415,851,092	414,111,780
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A	\$10,452,604	\$10,452,604
2. Deposits during 2015		N/A	
3. Administrative expenses		(1,000)	(1,000)
4. Amount transferred to employer reserves during 2015		(867,771)	(867,771)
5. Side account earnings during 2015		216,937	216,937
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)		\$9,800,770	\$9,800,770

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	\$9,800,770	\$10,452,604
Side Account 2	0	0
Side Account 3	0	0
Total	\$9,800,770	\$10,452,604

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$9,800,770	\$10,452,604
2. Combined valuation payroll	12,079,641	12,292,455
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	(8.54%)	(8.40%)

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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September 2016

City of Vale/2145

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Vale/2145

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Vale/2145

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Vale -- #2145

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Vale to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Vale.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Vale

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.75%	14.72%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	5.58%	5.58%	5.58%	5.58%	5.58%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.90%	25.87%	30.10%	19.17%	23.94%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	26.40%	26.37%	30.60%	19.60%	24.37%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Vale

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$928,470	\$691,654
Allocated pre-SLGRP pooled liability/(surplus)	(79,693)	(76,656)
Transition liability/(surplus)	257,191	270,566
Allocated pooled OPSRP UAL	68,920	48,970
Side account	0	0
Net unfunded pension actuarial accrued liability	1,174,888	934,534
Combined valuation payroll	484,793	428,348
Net pension UAL as a percentage of payroll	242%	218%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	5.58%	6.24%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,354	\$3,405
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$84,834	\$14,888	17.89%	\$101,940	\$18,237
Tier 2 General Service	12.26%	97,837	11,995	12.44%	94,202	11,719
Total General Service		182,671	26,883		196,142	29,956
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	1,636	310	19.00%	2,551	485
Total Police & Fire		1,636	310		2,551	485
Total		\$184,307	\$27,193		\$198,693	\$30,441
Employer normal cost rate						
General Service			14.72%			15.27%
Police & Fire			18.95%			19.01%
Aggregate (Default)			14.75%			15.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$270,566
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	6.75%
B. Actual employer payroll	215,580
C. Payment to transition liability/(surplus)	14,552
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	7.24%
B. Actual employer payroll	231,588
C. Payment to transition liability/(surplus)	16,767
4. Supplemental payment to transition liability	0
5. Interest	17,944
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$257,191

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	257,191	270,566
2. Combined valuation payroll	484,793	428,348
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	5.58%	6.24%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	484,793	428,348
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Veneta/2285

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Veneta/2285

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Veneta/2285

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Veneta -- #2285

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Veneta to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Veneta.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Veneta

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.76%	15.76%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.56%)	(2.56%)	(2.56%)	(2.56%)	(2.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.77%	18.77%	22.95%	11.03%	15.80%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.27%	19.27%	23.45%	11.46%	16.23%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Veneta

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,704,291	\$1,362,176
Allocated pre-SLGRP pooled liability/(surplus)	(146,283)	(150,970)
Transition liability/(surplus)	(216,135)	(223,989)
Allocated pooled OPSRP UAL	126,509	96,443
Side account	0	0
Net unfunded pension actuarial accrued liability	1,468,382	1,083,660
Combined valuation payroll	889,881	843,609
Net pension UAL as a percentage of payroll	165%	128%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.56%)	(2.62%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,321	\$6,706
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$329,696	\$57,862	17.89%	\$316,089	\$56,548
Tier 2 General Service	12.26%	168,753	20,689	12.44%	155,952	19,400
Total General Service		498,449	78,551		472,041	75,948
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$498,449	\$78,551		\$472,041	\$75,948
Employer normal cost rate						
General Service			15.76%			16.09%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.76%			16.09%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$223,989)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.95%)
B. Actual employer payroll	406,167
C. Payment to transition liability/(surplus)	(11,982)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.55%)
B. Actual employer payroll	429,436
C. Payment to transition liability/(surplus)	(10,951)
4. Supplemental payment to transition liability	0
5. Interest	(15,079)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$216,135)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(216,135)	(223,989)
2. Combined valuation payroll	889,881	843,609
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.56%)	(2.62%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	889,881	843,609
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Vernonia/2125
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Vernonia/2125

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Vernonia/2125

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Vernonia -- #2125

September 2016

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Executive Summary

Milliman has prepared this report for City of Vernonia to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Vernonia.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Vernonia

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.75%	15.75%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(6.04%)	(6.04%)	(6.04%)	(6.04%)	(6.04%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	15.28%	15.28%	19.47%	7.55%	12.32%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	15.78%	15.78%	19.97%	7.98%	12.75%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Vernonia

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,244,268	\$776,206
Allocated pre-SLGRP pooled liability/(surplus)	(106,798)	(86,027)
Transition liability/(surplus)	(373,044)	(379,552)
Allocated pooled OPSRP UAL	92,362	54,956
Side account	0	0
Net unfunded pension actuarial accrued liability	856,788	365,583
Combined valuation payroll	649,684	480,712
Net pension UAL as a percentage of payroll	132%	76%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(6.04%)	(7.80%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,155	\$3,821
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$71,872	\$12,614	17.89%	\$68,637	\$12,279
Tier 2 General Service	12.26%	37,208	4,562	12.44%	78,067	9,712
Total General Service		109,080	17,176		146,704	21,991
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$109,080	\$17,176		\$146,704	\$21,991
Employer normal cost rate						
General Service			15.75%			14.99%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.75%			14.99%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$379,552)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.01%)
B. Actual employer payroll	233,641
C. Payment to transition liability/(surplus)	(14,042)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(6.50%)
B. Actual employer payroll	284,501
C. Payment to transition liability/(surplus)	(18,492)
4. Supplemental payment to transition liability	0
5. Interest	(26,026)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$373,044)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(373,044)	(379,552)
2. Combined valuation payroll	649,684	480,712
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.04%)	(7.80%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	649,684	480,712
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Wallowa/2200
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Wallowa/2200

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Wallowa/2200

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Wallowa -- #2200

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Wallowa to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Wallowa.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Wallowa

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.42%	13.42%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(5.83%)	(5.83%)	(5.83%)	(5.83%)	(5.83%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.16%	13.16%	19.68%	7.76%	12.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.66%	13.66%	20.18%	8.19%	12.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Wallowa

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$290,869	\$240,829
Allocated pre-SLGRP pooled liability/(surplus)	(24,966)	(26,691)
Transition liability/(surplus)	(84,124)	(87,258)
Allocated pooled OPSRP UAL	21,591	17,051
Side account	0	0
Net unfunded pension actuarial accrued liability	203,370	143,931
Combined valuation payroll	151,875	149,148
Net pension UAL as a percentage of payroll	134%	97%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(5.83%)	(5.78%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$737	\$1,186
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$11,994	\$2,105	17.89%	\$11,757	\$2,103
Tier 2 General Service	12.26%	42,771	5,244	12.44%	42,854	5,331
Total General Service		54,765	7,349		54,611	7,434
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$54,765	\$7,349		\$54,611	\$7,434
Employer normal cost rate						
General Service			13.42%			13.61%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.42%			13.61%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$87,258)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.84%)
B. Actual employer payroll	72,231
C. Payment to transition liability/(surplus)	(4,941)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.61%)
B. Actual employer payroll	72,419
C. Payment to transition liability/(surplus)	(4,062)
4. Supplemental payment to transition liability	0
5. Interest	(5,869)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$84,124)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(84,124)	(87,258)
2. Combined valuation payroll	151,875	149,148
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.83%)	(5.78%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	151,875	149,148
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Warrenton/2238
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Warrenton/2238

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Warrenton/2238

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Warrenton -- #2238

September 2016

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Executive Summary

Milliman has prepared this report for City of Warrenton to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Warrenton.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Warrenton

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.02%	15.39%	19.83%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.33%)	(2.33%)	(2.33%)	(2.33%)	(2.33%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.99%	20.36%	24.80%	12.99%	17.76%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.49%	20.86%	25.30%	13.42%	18.19%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Warrenton

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$5,103,174	\$4,145,205
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(589,960)	(622,223)
Allocated pooled OPSRP UAL	378,807	293,483
Side account	0	0
Net unfunded pension actuarial accrued liability	4,892,021	3,816,465
Combined valuation payroll	2,664,579	2,567,166
Net pension UAL as a percentage of payroll	184%	149%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.33%)	(2.40%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$12,938	\$20,405
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$431,398	\$75,710	17.89%	\$410,203	\$73,385
Tier 2 General Service	12.26%	298,317	36,574	12.44%	366,627	45,608
Total General Service		729,715	112,284		776,830	118,993
Tier 1 Police & Fire	21.37%	154,362	32,987	21.53%	221,174	47,619
Tier 2 Police & Fire	18.95%	270,995	51,354	19.00%	259,933	49,387
Total Police & Fire		425,357	84,341		481,107	97,006
Total		\$1,155,072	\$196,625		\$1,257,937	\$215,999
Employer normal cost rate						
General Service			15.39%			15.32%
Police & Fire			19.83%			20.16%
Aggregate (Default)			17.02%			17.17%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$622,223)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.94%)
B. Actual employer payroll	1,309,930
C. Payment to transition liability/(surplus)	(38,512)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.53%)
B. Actual employer payroll	1,379,901
C. Payment to transition liability/(surplus)	(34,911)
4. Supplemental payment to transition liability	0
5. Interest	(41,160)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$589,960)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(589,960)	(622,223)
2. Combined valuation payroll	2,664,579	2,567,166
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.33%)	(2.40%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	2,664,579	2,567,166
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Wasco County Soil-Water Conservation District/2826
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016

Wasco County Soil-Water Conservation District/2826

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Wasco County Soil-Water Conservation District/2826

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Wasco County Soil-Water Conservation District -- #2826

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Wasco County Soil-Water Conservation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Wasco County Soil-Water Conservation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Wasco County Soil-Water Conservation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(6.56%)	(6.56%)	(6.56%)	(6.56%)	(6.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.00%	13.00%	20.68%	8.76%	13.53%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.50%	13.50%	21.18%	9.19%	13.96%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Wasco County Soil-Water Conservation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$651,682	\$541,248
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(212,264)	(214,616)
Allocated pooled OPSRP UAL	48,374	38,321
Side account	0	0
Net unfunded pension actuarial accrued liability	487,792	364,953
Combined valuation payroll	340,270	335,200
Net pension UAL as a percentage of payroll	143%	109%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(6.56%)	(6.33%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,652	\$2,664
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	220,015	26,974	12.44%	214,410	26,673
Total General Service		220,015	26,974		214,410	26,673
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$220,015	\$26,974		\$214,410	\$26,673
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$214,616)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.98%)
B. Actual employer payroll	161,425
C. Payment to transition liability/(surplus)	(8,039)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.37%)
B. Actual employer payroll	169,863
C. Payment to transition liability/(surplus)	(9,122)
4. Supplemental payment to transition liability	0
5. Interest	(14,809)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$212,264)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(212,264)	(214,616)
2. Combined valuation payroll	340,270	335,200
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(6.56%)	(6.33%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	340,270	335,200
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Wasco County/2020

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Wasco County/2020

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Wasco County/2020

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Wasco County -- #2020

September 2016

Secondary Employers

2049 Columbia Basin Nursing Home

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Executive Summary

Milliman has prepared this report for Wasco County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Wasco County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Wasco County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.23%	15.33%	19.81%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.50%)	(2.50%)	(2.50%)	(2.50%)	(2.50%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.30%	18.40%	22.88%	11.09%	15.86%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.80%	18.90%	23.38%	11.52%	16.29%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Wasco County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$10,768,741	\$8,727,500
Allocated pre-SLGRP pooled liability/(surplus)	(924,306)	(967,272)
Transition liability/(surplus)	(1,333,773)	(1,349,297)
Allocated pooled OPSRP UAL	799,360	617,912
Side account	0	0
Net unfunded pension actuarial accrued liability	9,310,022	7,028,843
Combined valuation payroll	5,622,807	5,405,026
Net pension UAL as a percentage of payroll	166%	130%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.50%)	(2.47%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$27,302	\$42,962
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,256,314	\$220,483	17.89%	\$1,298,677	\$232,333
Tier 2 General Service	12.26%	911,397	111,737	12.44%	897,125	111,602
Total General Service		2,167,711	332,220		2,195,802	343,935
Tier 1 Police & Fire	21.37%	194,279	41,517	21.53%	358,169	77,114
Tier 2 Police & Fire	18.95%	354,130	67,108	19.00%	353,349	67,136
Total Police & Fire		548,409	108,625		711,518	144,250
Total		\$2,716,120	\$440,845		\$2,907,320	\$488,185
Employer normal cost rate						
General Service			15.33%			15.66%
Police & Fire			19.81%			20.27%
Aggregate (Default)			16.23%			16.79%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,349,297)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.79%)
B. Actual employer payroll	2,647,930
C. Payment to transition liability/(surplus)	(47,398)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.22%)
B. Actual employer payroll	2,755,892
C. Payment to transition liability/(surplus)	(61,180)
4. Supplemental payment to transition liability	0
5. Interest	(93,054)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,333,773)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,333,773)	(1,349,297)
2. Combined valuation payroll	5,622,807	5,405,026
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.50%)	(2.47%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	5,622,807	5,405,026
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Washington County Consolidated Communications Agency/2695
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Washington County Consolidated Communications Agency/2695

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Washington County Consolidated Communications Agency/2695

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Washington County Consolidated Communications Agency -- #2695

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Washington County Consolidated Communications Agency to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Washington County Consolidated Communications Agency.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Washington County Consolidated Communications Agency

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.96%	14.70%	21.37%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.72%	0.72%	0.72%	0.72%	0.72%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.25%	20.99%	27.66%	14.31%	19.08%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.75%	21.49%	28.16%	14.74%	19.51%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Washington County Consolidated Communications Agency

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$12,912,680	\$10,895,354
Allocated pre-SLGRP pooled liability/(surplus)	(1,108,325)	(1,207,536)
Transition liability/(surplus)	461,977	475,088
Allocated pooled OPSRP UAL	958,504	771,397
Side account	0	0
Net unfunded pension actuarial accrued liability	13,224,836	10,934,303
Combined valuation payroll	6,742,247	6,747,599
Net pension UAL as a percentage of payroll	196%	162%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.72%	0.70%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$32,738	\$53,634
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,522,017	\$267,114	17.89%	\$1,608,315	\$287,728
Tier 2 General Service	12.26%	1,776,368	217,783	12.44%	1,723,571	214,412
Total General Service		3,298,385	484,897		3,331,886	502,140
Tier 1 Police & Fire	21.37%	130,968	27,988	21.53%	123,019	26,486
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		130,968	27,988		123,019	26,486
Total		\$3,429,353	\$512,885		\$3,454,905	\$528,626
Employer normal cost rate						
General Service			14.70%			15.07%
Police & Fire			21.37%			21.53%
Aggregate (Default)			14.96%			15.30%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$475,088
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.67%
B. Actual employer payroll	3,222,172
C. Payment to transition liability/(surplus)	21,589
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.71%
B. Actual employer payroll	3,345,490
C. Payment to transition liability/(surplus)	23,753
4. Supplemental payment to transition liability	0
5. Interest	32,231
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$461,977

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	461,977	475,088
2. Combined valuation payroll	6,742,247	6,747,599
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.72%	0.70%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	6,742,247	6,747,599
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Washington County Fire District #2/2578
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Washington County Fire District #2/2578

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Washington County Fire District #2/2578

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Washington County Fire District #2 -- #2578

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Washington County Fire District #2 to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Washington County Fire District #2.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Washington County Fire District #2

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.32%	14.81%	19.32%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.75%	0.75%	0.75%	0.75%	0.75%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	27.37%	22.86%	27.37%	16.07%	20.84%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	27.87%	23.36%	27.87%	16.50%	21.27%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Washington County Fire District #2

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,559,722	\$2,139,322
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	95,763	98,297
Allocated pooled OPSRP UAL	190,007	151,465
Side account	0	0
Net unfunded pension actuarial accrued liability	2,845,492	2,389,084
Combined valuation payroll	1,336,537	1,324,903
Net pension UAL as a percentage of payroll	213%	180%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.75%	0.73%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,490	\$10,531
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	123,213	26,331	21.53%	112,139	24,144
Tier 2 Police & Fire	18.95%	683,823	129,584	19.00%	735,720	139,787
Total Police & Fire		807,036	155,915		847,859	163,931
Total		\$807,036	\$155,915		\$847,859	\$163,931
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.32%			19.33%
Aggregate (Default)			19.32%			19.33%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$98,297
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.70%
B. Actual employer payroll	609,911
C. Payment to transition liability/(surplus)	4,269
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.72%
B. Actual employer payroll	686,908
C. Payment to transition liability/(surplus)	4,946
4. Supplemental payment to transition liability	0
5. Interest	6,681
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$95,763

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	95,763	98,297
2. Combined valuation payroll	1,336,537	1,324,903
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.75%	0.73%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,336,537	1,324,903
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Washington County/2011
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Washington County/2011

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Washington County/2011

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Washington County -- #2011

September 2016

Secondary Employers

2046	Washington County Fair Board
2532	Metzger Sanitary District

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Executive Summary

Milliman has prepared this report for Washington County to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Washington County.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Washington County

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.26%	14.55%	19.79%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	0.03%	0.03%	0.03%	0.03%	0.03%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.86%	20.15%	25.39%	13.62%	18.39%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	22.36%	20.65%	25.89%	14.05%	18.82%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Washington County

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$241,402,671	\$200,401,570
Allocated pre-SLGRP pooled liability/(surplus)	(20,720,143)	(22,210,575)
Transition liability/(surplus)	408,186	422,634
Allocated pooled OPSRP UAL	17,919,248	14,188,549
Side account	0	0
Net unfunded pension actuarial accrued liability	239,009,962	192,802,178
Combined valuation payroll	126,046,365	124,110,645
Net pension UAL as a percentage of payroll	190%	155%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	0.03%	0.03%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$612,038	\$986,504
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$18,788,508	\$3,297,383	17.89%	\$20,018,492	\$3,581,308
Tier 2 General Service	12.26%	24,643,312	3,021,270	12.44%	26,164,084	3,254,812
Total General Service		43,431,820	6,318,653		46,182,576	6,836,120
Tier 1 Police & Fire	21.37%	7,265,475	1,552,632	21.53%	8,133,560	1,751,155
Tier 2 Police & Fire	18.95%	13,754,295	2,606,439	19.00%	14,204,878	2,698,927
Total Police & Fire		21,019,770	4,159,071		22,338,438	4,450,082
Total		\$64,451,590	\$10,477,724		\$68,521,014	\$11,286,202
Employer normal cost rate						
General Service			14.55%			14.80%
Police & Fire			19.79%			19.92%
Aggregate (Default)			16.26%			16.47%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$422,634
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.04%
B. Actual employer payroll	60,431,192
C. Payment to transition liability/(surplus)	24,172
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.03%
B. Actual employer payroll	62,513,350
C. Payment to transition liability/(surplus)	18,754
4. Supplemental payment to transition liability	0
5. Interest	28,478
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$408,186

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	408,186	422,634
2. Combined valuation payroll	126,046,365	124,110,645
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	0.03%	0.03%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	126,046,365	124,110,645
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

West Extension Irrigation District/2540
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
West Extension Irrigation District/2540

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
West Extension Irrigation District/2540

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

West Extension Irrigation District -- #2540

September 2016

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Executive Summary

Milliman has prepared this report for West Extension Irrigation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIP),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIP. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to West Extension Irrigation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for West Extension Irrigation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(7.47%)	(7.47%)	(7.47%)	(7.47%)	(7.47%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	10.36%	10.36%	18.04%	6.12%	10.89%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	10.86%	10.86%	18.54%	6.55%	11.32%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

West Extension Irrigation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$501,004	\$527,284
Allocated pre-SLGRP pooled liability/(surplus)	(43,002)	(58,439)
Transition liability/(surplus)	(185,755)	(187,045)
Allocated pooled OPSRP UAL	37,189	37,332
Side account	0	0
Net unfunded pension actuarial accrued liability	309,436	319,132
Combined valuation payroll	261,595	326,552
Net pension UAL as a percentage of payroll	118%	98%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(7.47%)	(5.66%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,270	\$2,596
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	159,547	19,560	12.44%	190,297	23,673
Total General Service		159,547	19,560		190,297	23,673
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$159,547	\$19,560		\$190,297	\$23,673
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$187,045)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.70%)
B. Actual employer payroll	146,775
C. Payment to transition liability/(surplus)	(6,898)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.12%)
B. Actual employer payroll	143,577
C. Payment to transition liability/(surplus)	(7,352)
4. Supplemental payment to transition liability	0
5. Interest	(12,960)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$185,755)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(185,755)	(187,045)
2. Combined valuation payroll	261,595	326,552
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(7.47%)	(5.66%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	261,595	326,552
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of West Linn/2126
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of West Linn/2126

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of West Linn/2126

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of West Linn -- #2126

September 2016

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Executive Summary

Milliman has prepared this report for City of West Linn to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of West Linn.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of West Linn

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.75%	14.78%	20.29%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.07%)	(4.07%)	(4.07%)	(4.07%)	(4.07%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.98%	18.01%	23.52%	11.25%	16.02%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.48%	18.51%	24.02%	11.68%	16.45%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of West Linn

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$17,221,625	\$13,287,516
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(3,480,299)	(3,596,502)
Allocated pooled OPSRP UAL	1,278,356	940,764
Side account	0	0
Net unfunded pension actuarial accrued liability	15,019,682	10,631,778
Combined valuation payroll	8,992,126	8,229,088
Net pension UAL as a percentage of payroll	167%	129%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.07%)	(4.32%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$43,663	\$65,410
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,279,206	\$224,501	17.89%	\$1,240,024	\$221,840
Tier 2 General Service	12.26%	1,403,198	172,032	12.44%	1,405,993	174,906
Total General Service		2,682,404	396,533		2,646,017	396,746
Tier 1 Police & Fire	21.37%	826,479	176,619	21.53%	800,118	172,265
Tier 2 Police & Fire	18.95%	666,250	126,254	19.00%	557,430	105,912
Total Police & Fire		1,492,729	302,873		1,357,548	278,177
Total		\$4,175,133	\$699,406		\$4,003,565	\$674,923
Employer normal cost rate						
General Service			14.78%			14.99%
Police & Fire			20.29%			20.49%
Aggregate (Default)			16.75%			16.86%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$3,596,502)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.85%)
B. Actual employer payroll	4,188,940
C. Payment to transition liability/(surplus)	(161,274)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(4.28%)
B. Actual employer payroll	4,620,138
C. Payment to transition liability/(surplus)	(197,741)
4. Supplemental payment to transition liability	0
5. Interest	(242,812)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$3,480,299)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(3,480,299)	(3,596,502)
2. Combined valuation payroll	8,992,126	8,229,088
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.07%)	(4.32%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	8,992,126	8,229,088
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

West Multnomah Soil And Water Conservation District/2867
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016

West Multnomah Soil And Water Conservation District/2867

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016

West Multnomah Soil And Water Conservation District/2867

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

West Multnomah Soil And Water Conservation District -- #2867

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for West Multnomah Soil And Water Conservation District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIP),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIP. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to West Multnomah Soil And Water Conservation District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for West Multnomah Soil And Water Conservation District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.56%	19.56%	27.24%	15.32%	20.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.06%	20.06%	27.74%	15.75%	20.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

West Multnomah Soil And Water Conservation District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$910,491	\$756,776
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	0
Allocated pooled OPSRP UAL	67,585	53,580
Side account	0	0
Net unfunded pension actuarial accrued liability	978,076	810,356
Combined valuation payroll	475,405	468,679
Net pension UAL as a percentage of payroll	206%	173%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	0.00%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,308	\$3,725
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$84,781	\$15,167
Tier 2 General Service	12.26%	57,977	7,108	12.44%	52,342	6,511
Total General Service		57,977	7,108		137,123	21,678
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$57,977	\$7,108		\$137,123	\$21,678
Employer normal cost rate						
General Service			12.26%			15.81%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			15.81%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$0
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	0.00%
B. Actual employer payroll	0
C. Payment to transition liability/(surplus)	0
4. Supplemental payment to transition liability	0
5. Interest	0
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	0
2. Combined valuation payroll	475,405	468,679
3. Regular amortization factor	0.000	0.000
4. Total transition liability/(surplus) rate	0.00%	0.00%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	475,405	468,679
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

West Slope Water District/2589
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
West Slope Water District/2589

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
West Slope Water District/2589

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

West Slope Water District -- #2589

September 2016

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Executive Summary

Milliman has prepared this report for West Slope Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to West Slope Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for West Slope Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	17.55%	17.55%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	5.63%	5.63%	5.63%	5.63%	5.63%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	30.48%	30.48%	32.87%	20.95%	25.72%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	30.98%	30.98%	33.37%	21.38%	26.15%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

West Slope Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$736,613	\$873,306
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	205,890	211,203
Allocated pooled OPSRP UAL	54,679	61,831
Side account	0	0
Net unfunded pension actuarial accrued liability	997,182	1,146,340
Combined valuation payroll	384,616	540,847
Net pension UAL as a percentage of payroll	259%	212%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	5.63%	3.86%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$1,868	\$4,299
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$177,673	\$31,182	17.89%	\$96,848	\$17,326
Tier 2 General Service	12.26%	0	0	12.44%	226,682	28,199
Total General Service		177,673	31,182		323,530	45,525
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$177,673	\$31,182		\$323,530	\$45,525
Employer normal cost rate						
General Service			17.55%			14.07%
Police & Fire			19.94%			20.08%
Aggregate (Default)			17.55%			14.07%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$211,203
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	3.75%
B. Actual employer payroll	289,398
C. Payment to transition liability/(surplus)	10,852
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	3.97%
B. Actual employer payroll	222,279
C. Payment to transition liability/(surplus)	8,825
4. Supplemental payment to transition liability	0
5. Interest	14,364
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$205,890

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	205,890	211,203
2. Combined valuation payroll	384,616	540,847
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	5.63%	3.86%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	384,616	540,847
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

West Valley Housing Authority/2606
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
West Valley Housing Authority/2606

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
West Valley Housing Authority/2606

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

West Valley Housing Authority -- #2606

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for West Valley Housing Authority to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to West Valley Housing Authority.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for West Valley Housing Authority

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.89%	12.89%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(4.19%)	(4.19%)	(4.19%)	(4.19%)	(4.19%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.00%	16.00%	23.05%	11.13%	15.90%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	16.50%	16.50%	23.55%	11.56%	16.33%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

West Valley Housing Authority

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,756,895	\$1,138,104
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(365,368)	(367,604)
Allocated pooled OPSRP UAL	130,414	80,578
Side account	0	0
Net unfunded pension actuarial accrued liability	1,521,941	851,078
Combined valuation payroll	917,348	704,839
Net pension UAL as a percentage of payroll	166%	121%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(4.19%)	(5.15%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,454	\$5,602
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$49,717	\$8,725	17.89%	\$140,834	\$25,195
Tier 2 General Service	12.26%	367,250	45,025	12.44%	268,027	33,343
Total General Service		416,967	53,750		408,861	58,538
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$416,967	\$53,750		\$408,861	\$58,538
Employer normal cost rate						
General Service			12.89%			14.32%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.89%			14.32%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$367,604)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(3.13%)
B. Actual employer payroll	378,572
C. Payment to transition liability/(surplus)	(11,849)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.60%)
B. Actual employer payroll	441,041
C. Payment to transition liability/(surplus)	(15,878)
4. Supplemental payment to transition liability	0
5. Interest	(25,491)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$365,368)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(365,368)	(367,604)
2. Combined valuation payroll	917,348	704,839
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(4.19%)	(5.15%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	917,348	704,839
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Western Lane Ambulance District/2754
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Western Lane Ambulance District/2754

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Western Lane Ambulance District/2754

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Western Lane Ambulance District -- #2754

September 2016

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Executive Summary

Milliman has prepared this report for Western Lane Ambulance District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Western Lane Ambulance District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Western Lane Ambulance District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	13.84%	13.84%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.23%)	(0.23%)	(0.23%)	(0.23%)	(0.23%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.18%	19.18%	25.28%	13.36%	18.13%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.68%	19.68%	25.78%	13.79%	18.56%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Western Lane Ambulance District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,488,741	\$1,718,381
Allocated pre-SLGRP pooled liability/(surplus)	(213,614)	(190,449)
Transition liability/(surplus)	(28,534)	(29,844)
Allocated pooled OPSRP UAL	184,738	121,662
Side account	0	0
Net unfunded pension actuarial accrued liability	2,431,331	1,619,750
Combined valuation payroll	1,299,475	1,064,210
Net pension UAL as a percentage of payroll	187%	152%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.23%)	(0.28%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,310	\$8,459
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$200,034	\$35,106	17.89%	\$187,280	\$33,504
Tier 2 General Service	12.26%	470,410	57,672	12.44%	427,693	53,205
Total General Service		670,444	92,778		614,973	86,709
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$670,444	\$92,778		\$614,973	\$86,709
Employer normal cost rate						
General Service			13.84%			14.10%
Police & Fire			19.94%			20.08%
Aggregate (Default)			13.84%			14.10%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$29,844)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.28%)
B. Actual employer payroll	581,919
C. Payment to transition liability/(surplus)	(1,629)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.27%)
B. Actual employer payroll	619,124
C. Payment to transition liability/(surplus)	(1,672)
4. Supplemental payment to transition liability	0
5. Interest	(1,991)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$28,534)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(28,534)	(29,844)
2. Combined valuation payroll	1,299,475	1,064,210
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.23%)	(0.28%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,299,475	1,064,210
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Westfir/2265

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Westfir/2265

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Westfir/2265

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Westfir -- #2265

September 2016

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Executive Summary

Milliman has prepared this report for City of Westfir to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Westfir.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Westfir

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(9.91%)	(9.91%)	(9.91%)	(9.91%)	(9.91%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	13.17%	12.20%	17.33%	5.41%	10.18%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	13.67%	12.70%	17.83%	5.84%	10.61%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Westfir

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$105,818	\$82,101
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(64,764)	(65,768)
Allocated pooled OPSRP UAL	7,855	5,813
Side account	0	0
Net unfunded pension actuarial accrued liability	48,909	22,146
Combined valuation payroll	55,252	50,846
Net pension UAL as a percentage of payroll	89%	44%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(9.91%)	(10.47%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$268	\$404
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$65,768)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(10.62%)
B. Actual employer payroll	25,600
C. Payment to transition liability/(surplus)	(2,719)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(10.62%)
B. Actual employer payroll	26,393
C. Payment to transition liability/(surplus)	(2,803)
4. Supplemental payment to transition liability	0
5. Interest	(4,518)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$64,764)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(64,764)	(65,768)
2. Combined valuation payroll	55,252	50,846
3. Regular amortization factor	11.826	12.353
4. Total transition liability/(surplus) rate	(9.91%)	(10.47%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	55,252	50,846
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Wheeler/2147
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Wheeler/2147

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Wheeler/2147

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Wheeler -- #2147

September 2016

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Executive Summary

Milliman has prepared this report for City of Wheeler to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Wheeler.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Wheeler

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	0.00%	0.00%	0.00%	0.00%	0.00%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	23.08%	22.11%	27.24%	15.32%	20.09%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	23.58%	22.61%	27.74%	15.75%	20.52%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Wheeler

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$305,999	\$241,911
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	0	(1,109)
Allocated pooled OPSRP UAL	22,714	17,127
Side account	0	0
Net unfunded pension actuarial accrued liability	328,713	257,929
Combined valuation payroll	159,775	149,818
Net pension UAL as a percentage of payroll	206%	172%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	0.00%	(0.07%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$776	\$1,191
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,109)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.35%)
B. Actual employer payroll	71,776
C. Payment to transition liability/(surplus)	(3,122)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.43%)
B. Actual employer payroll	78,532
C. Payment to transition liability/(surplus)	(338)
4. Supplemental payment to transition liability	0
5. Interest	(2,351)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$0

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	0	(1,109)
2. Combined valuation payroll	159,775	149,818
3. Regular amortization factor	0.000	10.118
4. Total transition liability/(surplus) rate	0.00%	(0.07%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	159,775	149,818
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Wickiup Water District/2817
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Wickiup Water District/2817

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Wickiup Water District/2817

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Wickiup Water District -- #2817

September 2016

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Executive Summary

Milliman has prepared this report for Wickiup Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Wickiup Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Wickiup Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.78%	14.81%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.13%)	(0.13%)	(0.13%)	(0.13%)	(0.13%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	21.22%	20.25%	25.38%	13.46%	18.23%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	21.72%	20.75%	25.88%	13.89%	18.66%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Wickiup Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$185,293	\$165,027
Allocated pre-SLGRP pooled liability/(surplus)	(15,904)	(18,290)
Transition liability/(surplus)	(1,233)	(1,294)
Allocated pooled OPSRP UAL	13,754	11,684
Side account	0	0
Net unfunded pension actuarial accrued liability	181,910	157,127
Combined valuation payroll	96,749	102,203
Net pension UAL as a percentage of payroll	188%	154%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.13%)	(0.13%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$470	\$812
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$0	\$0		\$0	\$0
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.78%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,294)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.18%)
B. Actual employer payroll	45,049
C. Payment to transition liability/(surplus)	(81)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.13%)
B. Actual employer payroll	50,606
C. Payment to transition liability/(surplus)	(66)
4. Supplemental payment to transition liability	0
5. Interest	(86)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,233)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,233)	(1,294)
2. Combined valuation payroll	96,749	102,203
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.13%)	(0.13%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	96,749	102,203
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Wilsonville/2240
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Wilsonville/2240

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Wilsonville/2240

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Wilsonville -- #2240

September 2016

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Executive Summary

Milliman has prepared this report for City of Wilsonville to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Wilsonville.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Wilsonville

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.22%	15.22%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.56%)	(0.56%)	(0.56%)	(0.56%)	(0.56%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.23%	20.23%	24.95%	13.03%	17.80%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.73%	20.73%	25.45%	13.46%	18.23%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Wilsonville

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$17,377,736	\$14,542,799
Allocated pre-SLGRP pooled liability/(surplus)	(1,491,571)	(1,611,783)
Transition liability/(surplus)	(485,360)	(501,429)
Allocated pooled OPSRP UAL	1,289,944	1,029,639
Side account	0	0
Net unfunded pension actuarial accrued liability	16,690,749	13,459,226
Combined valuation payroll	9,073,638	9,006,497
Net pension UAL as a percentage of payroll	184%	149%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.56%)	(0.55%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$44,058	\$71,589
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$2,545,679	\$446,767	17.89%	\$2,688,092	\$480,900
Tier 2 General Service	12.26%	1,997,045	244,838	12.44%	2,144,840	266,818
Total General Service		4,542,724	691,605		4,832,932	747,718
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$4,542,724	\$691,605		\$4,832,932	\$747,718
Employer normal cost rate						
General Service			15.22%			15.47%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.22%			15.47%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$501,429)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.55%)
B. Actual employer payroll	4,565,692
C. Payment to transition liability/(surplus)	(25,111)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.53%)
B. Actual employer payroll	4,683,057
C. Payment to transition liability/(surplus)	(24,820)
4. Supplemental payment to transition liability	0
5. Interest	(33,862)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$485,360)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(485,360)	(501,429)
2. Combined valuation payroll	9,073,638	9,006,497
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.56%)	(0.55%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	9,073,638	9,006,497
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Winston/2280
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Winston/2280

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Winston/2280

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Winston -- #2280

September 2016

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Executive Summary

Milliman has prepared this report for City of Winston to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Winston.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Winston

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.17%	14.62%	20.16%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(9.59%)	(9.59%)	(9.59%)	(9.59%)	(9.59%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	14.15%	10.60%	16.14%	4.00%	8.77%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	14.65%	11.10%	16.64%	4.43%	9.20%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Winston

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,356,599	\$2,102,899
Allocated pre-SLGRP pooled liability/(surplus)	(202,272)	(233,065)
Transition liability/(surplus)	(1,121,287)	(1,150,157)
Allocated pooled OPSRP UAL	174,930	148,887
Side account	0	0
Net unfunded pension actuarial accrued liability	1,207,970	868,564
Combined valuation payroll	1,230,478	1,302,346
Net pension UAL as a percentage of payroll	98%	67%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(9.59%)	(8.73%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$5,975	\$10,352
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,568	\$14,491	17.89%	\$80,554	\$14,411
Tier 2 General Service	12.26%	102,764	12,599	12.44%	99,480	12,375
Total General Service		185,332	27,090		180,034	26,786
Tier 1 Police & Fire	21.37%	166,131	35,502	21.53%	153,926	33,140
Tier 2 Police & Fire	18.95%	165,558	31,373	19.00%	160,300	30,457
Total Police & Fire		331,689	66,875		314,226	63,597
Total		\$517,021	\$93,965		\$494,260	\$90,383
Employer normal cost rate						
General Service			14.62%			14.88%
Police & Fire			20.16%			20.24%
Aggregate (Default)			18.17%			18.29%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,150,157)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(8.63%)
B. Actual employer payroll	636,676
C. Payment to transition liability/(surplus)	(54,945)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(8.31%)
B. Actual employer payroll	627,604
C. Payment to transition liability/(surplus)	(52,154)
4. Supplemental payment to transition liability	0
5. Interest	(78,229)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,121,287)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,121,287)	(1,150,157)
2. Combined valuation payroll	1,230,478	1,302,346
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(9.59%)	(8.73%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,230,478	1,302,346
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Winston-Dillard Fire District/2552
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Winston-Dillard Fire District/2552

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Winston-Dillard Fire District/2552

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Winston-Dillard Fire District -- #2552

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Winston-Dillard Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Winston-Dillard Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Winston-Dillard Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	20.07%	14.81%	20.07%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	10.72%	10.72%	10.72%	10.72%	10.72%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	36.36%	31.10%	36.36%	24.31%	29.08%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	36.86%	31.60%	36.86%	24.74%	29.51%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Winston-Dillard Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,764,803	\$1,327,899
Allocated pre-SLGRP pooled liability/(surplus)	(151,477)	(147,172)
Transition liability/(surplus)	938,571	950,909
Allocated pooled OPSRP UAL	131,001	94,016
Side account	0	0
Net unfunded pension actuarial accrued liability	2,682,898	2,225,652
Combined valuation payroll	921,477	822,381
Net pension UAL as a percentage of payroll	291%	271%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	10.72%	11.43%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$4,474	\$6,537
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	316,389	67,612	21.53%	293,576	63,207
Tier 2 Police & Fire	18.95%	366,936	69,534	19.00%	343,678	65,299
Total Police & Fire		683,325	137,146		637,254	128,506
Total		\$683,325	\$137,146		\$637,254	\$128,506
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			20.07%			20.17%
Aggregate (Default)			20.07%			20.17%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$950,909
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	8.18%
B. Actual employer payroll	410,240
C. Payment to transition liability/(surplus)	33,558
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	8.99%
B. Actual employer payroll	492,348
C. Payment to transition liability/(surplus)	44,262
4. Supplemental payment to transition liability	0
5. Interest	65,482
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$938,571

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	938,571	950,909
2. Combined valuation payroll	921,477	822,381
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	10.72%	11.43%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	921,477	822,381
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Winston-Dillard Water District/2600
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Winston-Dillard Water District/2600

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Winston-Dillard Water District/2600

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Winston-Dillard Water District -- #2600

September 2016

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Executive Summary

Milliman has prepared this report for Winston-Dillard Water District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Winston-Dillard Water District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Winston-Dillard Water District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.35%	14.35%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(2.88%)	(2.88%)	(2.88%)	(2.88%)	(2.88%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	18.77%	18.77%	24.36%	12.44%	17.21%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	19.27%	19.27%	24.86%	12.87%	17.64%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Winston-Dillard Water District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$808,491	\$663,891
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(115,631)	(118,800)
Allocated pooled OPSRP UAL	60,014	47,004
Side account	0	0
Net unfunded pension actuarial accrued liability	752,874	592,095
Combined valuation payroll	422,147	411,154
Net pension UAL as a percentage of payroll	178%	144%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(2.88%)	(2.86%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,050	\$3,268
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$82,016	\$14,394	17.89%	\$80,902	\$14,473
Tier 2 General Service	12.26%	125,453	15,381	12.44%	182,173	22,662
Total General Service		207,469	29,775		263,075	37,135
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$207,469	\$29,775		\$263,075	\$37,135
Employer normal cost rate						
General Service			14.35%			14.12%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.35%			14.12%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$118,800)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(2.86%)
B. Actual employer payroll	197,423
C. Payment to transition liability/(surplus)	(5,646)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(2.80%)
B. Actual employer payroll	199,626
C. Payment to transition liability/(surplus)	(5,590)
4. Supplemental payment to transition liability	0
5. Interest	(8,067)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$115,631)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(115,631)	(118,800)
2. Combined valuation payroll	422,147	411,154
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.88%)	(2.86%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	422,147	411,154
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Wood Village/2185
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Wood Village/2185

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Wood Village/2185

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Wood Village -- #2185

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Wood Village to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Wood Village.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Wood Village

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.79%	15.79%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.18%	6.18%	6.18%	6.18%	6.18%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(1.97%)	(1.97%)	(1.97%)	(1.97%)	(1.97%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.54%	19.54%	23.69%	11.77%	16.54%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.04%	20.04%	24.19%	12.20%	16.97%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Wood Village

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,568,058	\$1,357,902
Allocated pre-SLGRP pooled liability/(surplus)	(134,590)	(150,497)
Transition liability/(surplus)	(153,106)	(157,249)
Allocated pooled OPSRP UAL	116,396	96,140
Side account	0	0
Net unfunded pension actuarial accrued liability	1,396,758	1,146,296
Combined valuation payroll	818,748	840,962
Net pension UAL as a percentage of payroll	171%	136%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(1.97%)	(1.85%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,976	\$6,684
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$222,346	\$39,022	17.89%	\$211,500	\$37,837
Tier 2 General Service	12.26%	110,501	13,547	12.44%	107,528	13,376
Total General Service		332,847	52,569		319,028	51,213
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$332,847	\$52,569		\$319,028	\$51,213
Employer normal cost rate						
General Service			15.79%			16.05%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.79%			16.05%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$157,249)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.67%)
B. Actual employer payroll	393,843
C. Payment to transition liability/(surplus)	(6,577)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.90%)
B. Actual employer payroll	434,087
C. Payment to transition liability/(surplus)	(8,248)
4. Supplemental payment to transition liability	0
5. Interest	(10,682)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$153,106)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(153,106)	(157,249)
2. Combined valuation payroll	818,748	840,962
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.97%)	(1.85%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	818,748	840,962
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Woodburn/2303
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Woodburn/2303

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Woodburn/2303

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Woodburn -- #2303

September 2016

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Executive Summary

Milliman has prepared this report for City of Woodburn to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Woodburn.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Woodburn

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	16.62%	14.83%	19.71%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(2.04%)	(2.04%)	(2.04%)	(2.04%)	(2.04%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	20.15%	18.36%	23.24%	11.55%	16.32%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.65%	18.86%	23.74%	11.98%	16.75%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Woodburn

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$16,379,622	\$13,876,037
Allocated pre-SLGRP pooled liability/(surplus)	(1,405,900)	(1,537,886)
Transition liability/(surplus)	(1,657,206)	(1,693,883)
Allocated pooled OPSRP UAL	1,215,854	982,432
Side account	0	0
Net unfunded pension actuarial accrued liability	14,532,370	11,626,700
Combined valuation payroll	8,552,481	8,593,565
Net pension UAL as a percentage of payroll	170%	135%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(2.04%)	(1.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$41,528	\$68,307
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$1,320,797	\$231,800	17.89%	\$1,471,921	\$263,327
Tier 2 General Service	12.26%	1,401,431	171,815	12.44%	1,475,166	183,511
Total General Service		2,722,228	403,615		2,947,087	446,838
Tier 1 Police & Fire	21.37%	495,550	105,899	21.53%	762,683	164,206
Tier 2 Police & Fire	18.95%	1,084,989	205,605	19.00%	1,034,035	196,467
Total Police & Fire		1,580,539	311,504		1,796,718	360,673
Total		\$4,302,767	\$715,119		\$4,743,805	\$807,511
Employer normal cost rate						
General Service			14.83%			15.16%
Police & Fire			19.71%			20.07%
Aggregate (Default)			16.62%			17.02%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$1,693,883)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(1.73%)
B. Actual employer payroll	4,276,943
C. Payment to transition liability/(surplus)	(73,991)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(1.84%)
B. Actual employer payroll	4,255,694
C. Payment to transition liability/(surplus)	(78,305)
4. Supplemental payment to transition liability	0
5. Interest	(115,619)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$1,657,206)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(1,657,206)	(1,693,883)
2. Combined valuation payroll	8,552,481	8,593,565
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(2.04%)	(1.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015			
(1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	8,552,481	8,593,565
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Woodburn Fire District/2676
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Woodburn Fire District/2676

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Woodburn Fire District/2676

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Woodburn Fire District -- #2676

September 2016

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Executive Summary

Milliman has prepared this report for Woodburn Fire District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Woodburn Fire District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Woodburn Fire District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	19.57%	14.81%	19.57%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	4.56%	4.56%	4.56%	4.56%	4.56%
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	31.43%	26.67%	31.43%	19.88%	24.65%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	31.93%	27.17%	31.93%	20.31%	25.08%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Woodburn Fire District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$2,738,231	\$1,935,912
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	620,052	647,208
Allocated pooled OPSRP UAL	203,258	137,064
Side account	0	0
Net unfunded pension actuarial accrued liability	3,561,541	2,720,184
Combined valuation payroll	1,429,744	1,198,929
Net pension UAL as a percentage of payroll	249%	227%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	4.56%	5.34%
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$6,942	\$9,530
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	210,465	44,976	21.53%	210,336	45,285
Tier 2 Police & Fire	18.95%	611,873	115,950	19.00%	613,156	116,500
Total Police & Fire		822,338	160,926		823,492	161,785
Total		\$822,338	\$160,926		\$823,492	\$161,785
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			19.57%			19.65%
Aggregate (Default)			19.57%			19.65%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	\$647,208
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	5.43%
B. Actual employer payroll	614,361
C. Payment to transition liability/(surplus)	33,360
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	5.30%
B. Actual employer payroll	699,156
C. Payment to transition liability/(surplus)	37,055
4. Supplemental payment to transition liability	0
5. Interest	43,259
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	\$620,052

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	620,052	647,208
2. Combined valuation payroll	1,429,744	1,198,929
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	4.56%	5.34%

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	1,429,744	1,198,929
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Yachats/2300
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Yachats/2300

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Yachats/2300

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Yachats -- #2300

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for City of Yachats to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Yachats.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Yachats

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	15.50%	15.50%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.82%)	(5.82%)	(5.82%)	(5.82%)	(5.82%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	16.98%	16.98%	21.42%	9.50%	14.27%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.48%	17.48%	21.92%	9.93%	14.70%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Yachats

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$995,203	\$913,171
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(287,273)	(296,190)
Allocated pooled OPSRP UAL	73,874	64,653
Side account	0	0
Net unfunded pension actuarial accrued liability	781,804	681,634
Combined valuation payroll	519,637	565,536
Net pension UAL as a percentage of payroll	150%	121%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.82%)	(5.18%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,523	\$4,495
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPA program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$148,514	\$26,064	17.89%	\$145,883	\$26,098
Tier 2 General Service	12.26%	94,134	11,541	12.44%	92,394	11,494
Total General Service		242,648	37,605		238,277	37,592
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$242,648	\$37,605		\$238,277	\$37,592
Employer normal cost rate						
General Service			15.50%			15.78%
Police & Fire			19.94%			20.08%
Aggregate (Default)			15.50%			15.78%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$296,190)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(5.49%)
B. Actual employer payroll	283,353
C. Payment to transition liability/(surplus)	(15,556)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(5.33%)
B. Actual employer payroll	251,455
C. Payment to transition liability/(surplus)	(13,403)
4. Supplemental payment to transition liability	0
5. Interest	(20,042)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$287,273)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(287,273)	(296,190)
2. Combined valuation payroll	519,637	565,536
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.82%)	(5.18%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	519,637	565,536
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Yachats Rural Fire Protection District/2843
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Yachats Rural Fire Protection District/2843

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Yachats Rural Fire Protection District/2843

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Yachats Rural Fire Protection District -- #2843

September 2016

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Executive Summary

Milliman has prepared this report for Yachats Rural Fire Protection District to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Yachats Rural Fire Protection District.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Yachats Rural Fire Protection District

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	18.95%	14.81%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(1.11%)	(1.11%)	(1.11%)	(1.11%)	(1.11%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	25.14%	21.00%	25.14%	14.21%	18.98%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	25.64%	21.50%	25.64%	14.64%	19.41%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Yachats Rural Fire Protection District

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$838,700	\$283,059
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(46,002)	(52,370)
Allocated pooled OPSRP UAL	62,256	20,041
Side account	0	0
Net unfunded pension actuarial accrued liability	854,954	250,730
Combined valuation payroll	437,920	175,301
Net pension UAL as a percentage of payroll	195%	143%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(1.11%)	(2.95%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,126	\$1,393
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	0	0	12.44%	0	0
Total General Service		0	0		0	0
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	156,883	29,729	19.00%	49,851	9,472
Total Police & Fire		156,883	29,729		49,851	9,472
Total		\$156,883	\$29,729		\$49,851	\$9,472
Employer normal cost rate						
General Service			14.81%			15.16%
Police & Fire			18.95%			19.00%
Aggregate (Default)			18.95%			19.00%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$52,370)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(4.33%)
B. Actual employer payroll	107,952
C. Payment to transition liability/(surplus)	(4,674)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(3.22%)
B. Actual employer payroll	152,277
C. Payment to transition liability/(surplus)	(4,903)
4. Supplemental payment to transition liability	0
5. Interest	(3,209)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$46,002)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(46,002)	(52,370)
2. Combined valuation payroll	437,920	175,301
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(1.11%)	(2.95%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	437,920	175,301
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Yamhill/2214
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Yamhill/2214

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Yamhill/2214

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee', with a stylized flourish at the end.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau', with a stylized flourish at the end.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Yamhill -- #2214

September 2016

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Executive Summary

Milliman has prepared this report for City of Yamhill to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Yamhill.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Yamhill

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates		General Service	Police & Fire
	All T1/T2 Payroll	General Service	Police & Fire		
Pension					
Normal cost rate	15.76%	13.66%	18.95%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	0.00%	0.00%	0.00%	0.00%	0.00%
Transition liability/(surplus) rate ²	(5.85%)	(5.85%)	(5.85%)	(5.85%)	(5.85%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.21%	15.11%	20.40%	9.47%	14.24%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.71%	15.61%	20.90%	9.90%	14.67%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Yamhill

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$797,500	\$602,400
Allocated pre-SLGRP pooled liability/(surplus)	0	0
Transition liability/(surplus)	(231,666)	(242,918)
Allocated pooled OPSRP UAL	59,198	42,650
Side account	0	0
Net unfunded pension actuarial accrued liability	625,032	402,132
Combined valuation payroll	416,408	373,072
Net pension UAL as a percentage of payroll	150%	108%
Pre-SLGRP pooled rate	0.00%	0.00%
Transition rate	(5.85%)	(6.44%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$2,022	\$2,965
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$43,273	\$7,594	17.89%	\$42,257	\$7,560
Tier 2 General Service	12.26%	120,035	14,716	12.44%	113,380	14,104
Total General Service		163,308	22,310		155,637	21,664
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	107,064	20,289	19.00%	96,508	18,337
Total Police & Fire		107,064	20,289		96,508	18,337
Total		\$270,372	\$42,599		\$252,145	\$40,001
Employer normal cost rate						
General Service			13.66%			13.92%
Police & Fire			18.95%			19.00%
Aggregate (Default)			15.76%			15.86%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$242,918)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(6.67%)
B. Actual employer payroll	186,519
C. Payment to transition liability/(surplus)	(12,441)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(7.25%)
B. Actual employer payroll	206,540
C. Payment to transition liability/(surplus)	(14,974)
4. Supplemental payment to transition liability	0
5. Interest	(16,163)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$231,666)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(231,666)	(242,918)
2. Combined valuation payroll	416,408	373,072
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(5.85%)	(6.44%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	416,408	373,072
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

Yamhill Communications Agency/2726
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
Yamhill Communications Agency/2726

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
Yamhill Communications Agency/2726

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

Yamhill Communications Agency -- #2726

September 2016

This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Executive Summary

Milliman has prepared this report for Yamhill Communications Agency to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to Yamhill Communications Agency.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for Yamhill Communications Agency

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	14.54%	14.54%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.15%)	(0.15%)	(0.15%)	(0.15%)	(0.15%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	19.96%	19.96%	25.36%	13.44%	18.21%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	20.46%	20.46%	25.86%	13.87%	18.64%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

Yamhill Communications Agency

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$1,541,775	\$1,431,710
Allocated pre-SLGRP pooled liability/(surplus)	(132,334)	(158,677)
Transition liability/(surplus)	(11,208)	(11,312)
Allocated pooled OPSRP UAL	114,446	101,366
Side account	0	0
Net unfunded pension actuarial accrued liability	1,512,679	1,363,087
Combined valuation payroll	805,025	886,672
Net pension UAL as a percentage of payroll	188%	154%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.15%)	(0.13%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$3,909	\$7,048
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions) RHIA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions) RHIPA	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$168,257	\$29,529	17.89%	\$323,815	\$57,931
Tier 2 General Service	12.26%	222,852	27,322	12.44%	219,828	27,347
Total General Service		391,109	56,851		543,643	85,278
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$391,109	\$56,851		\$543,643	\$85,278
Employer normal cost rate						
General Service			14.54%			15.69%
Police & Fire			19.94%			20.08%
Aggregate (Default)			14.54%			15.69%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$11,312)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.09%)
B. Actual employer payroll	447,495
C. Payment to transition liability/(surplus)	(403)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.11%)
B. Actual employer payroll	439,608
C. Payment to transition liability/(surplus)	(483)
4. Supplemental payment to transition liability	0
5. Interest	(782)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$11,208)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(11,208)	(11,312)
2. Combined valuation payroll	805,025	886,672
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.15%)	(0.13%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	805,025	886,672
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

September 2016

City of Yoncalla/2307

Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2015. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2017. Information is also provided to assist you in preparing your required financial reporting disclosures under Statement 45 of the Governmental Accounting Standards Board. GASB 68 information will be provided separately by PERS and is not included in this report.

This report reflects the System's benefit provisions in effect as of December 31, 2015. The full development of the valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), OPSRP, Retiree Health Insurance Account (RHIA), and Retiree Health Insurance Premium Account (RHIPA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide actuarial valuation report. Further, costs of pension obligation bond payments are not included in this or the system-wide actuarial valuation report.

If you have any questions about this report, please contact Debra Hembree, Actuarial Services Coordinator at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.

Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Employer-specific weighted average Tier 1/Tier 2 normal cost rates,
- Transition liability or surplus balances and rate calculation,
- Side account balances, transactions and rate relief,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide actuarial valuation report, which is available at www.oregon.gov/PERS/Pages/section/financial_reports/financials.aspx.

September 2016
City of Yoncalla/2307

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in September 2015.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2017 to June 2019 for System employers. Other actuarial computations presented in this report under GASB Statement No. 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statement No. 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.



September 2016
City of Yoncalla/2307

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Additional information is provided in the system-wide actuarial valuation report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Larrabee'.

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Scott Preppernau'.

Scott Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary



ACTUARIAL VALUATION REPORT DECEMBER 31, 2015

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

STATE AND LOCAL GOVERNMENT RATE POOL

City of Yoncalla -- #2307

September 2016

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Executive Summary

Milliman has prepared this report for City of Yoncalla to:

- Provide summary December 31, 2015 valuation results for the Tier 1/Tier 2 State and Local Government Rate Pool (SLGRP), Oregon Public Service Retirement Plan (OPSRP), and the Retiree Health Insurance programs (RHIA and RHIPA),
- Provide employer-specific contribution rates effective July 1, 2017 through June 30, 2019,
- Provide employer-specific information on side accounts and pre-SLGRP liabilities as of December 31, 2015, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statement Number 45. GASB 68 information will be provided separately by PERS and is not included in this report.

This report summarizes the valuation results for the SLGRP, OPSRP, RHIA and RHIPA. The full development of these results can be found in the December 31, 2015 system-wide actuarial valuation report. This report develops employer-specific side account and pre-SLGRP rates and applies the results from the system-wide valuation to City of Yoncalla.

Executive Summary

Employer Contribution Rates

SLGRP employers have the option to elect separate Tier 1/Tier 2 rates to be applied to general service and police and fire payroll or to have the default blended rate apply to all Tier 1/Tier 2 payroll.

The following table summarizes the employer contribution rates effective July 1, 2017 through June 30, 2019 for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

Employer Rates Effective July 1, 2017 for City of Yoncalla

	Payroll				
	Tier 1/Tier 2			OPSRP	
	Default	Optional Separate Rates			
	All T1/T2 Payroll	General Service	Police & Fire	General Service	Police & Fire
Pension					
Normal cost rate	12.26%	12.26%	19.94%	8.02%	12.79%
Tier 1/Tier 2 UAL rate ¹	6.03%	6.03%	6.03%	6.03%	6.03%
OPSRP UAL rate	1.27%	1.27%	1.27%	1.27%	1.27%
Pre-SLGRP pooled liability rate	(1.73%)	(1.73%)	(1.73%)	(1.73%)	(1.73%)
Transition liability/(surplus) rate ²	(0.39%)	(0.39%)	(0.39%)	(0.39%)	(0.39%)
Side account rate relief ²	0.00%	0.00%	0.00%	0.00%	0.00%
Net pension contribution rate	17.44%	17.44%	25.12%	13.20%	17.97%
Retiree Healthcare					
Normal cost rate	0.07%	0.07%	0.07%	0.00%	0.00%
UAL rate	0.43%	0.43%	0.43%	0.43%	0.43%
Net retiree healthcare rate	0.50%	0.50%	0.50%	0.43%	0.43%
Total net employer contribution rate	17.94%	17.94%	25.62%	13.63%	18.40%

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

¹ Includes Multnomah Fire District #10 rate.

² The transition liability/(surplus) rate and side account rate relief shown may be reduced for each individual payroll such that the net pension contribution rate for that payroll does not go below 0.00%.

Executive Summary

Employer Contribution Rates (continued)

Range of Potential Tier 1/Tier 2 Employer Pension Contribution Rates for the July 2019 to June 2021 Biennium

The rate collar limits changes in contribution rates for the rate pool, but does not limit changes in rates for individual employers related to pre-SLGRP liabilities or side accounts. In addition, changes in an individual employer's workforce between Tier 1 and Tier 2 or between general service and police and fire can impact that employer's normal cost rate in a way that is not limited by the collar. The table below shows the possible minimum and maximum rates for the SLGRP first effective as of July 1, 2019, which will depend on the funded status as of December 31, 2017. If the Pool's funded status excluding side accounts is less than 60 percent or greater than 140 percent, the rate collar doubles in size. If the Pool's funded status excluding side accounts is between 60 and 70 percent or between 130 and 140 percent, the size of the rate collar is increased on a graded scale. The rates shown are before any adjustment for side account rate offsets or pre-SLGRP liabilities.

For comparison, the Pool's funded status as of December 31, 2015 is 72%.

Funded Status as of December 31, 2017	70% to 130%	Under 60% or Over 140%
2017-2019 Normal Cost + Tier 1/Tier 2 UAL Rate	21.88%	21.88%
Minimum 2019-2021 Rate	17.50%	13.12%
Maximum 2019-2021 Rate	26.26%	30.64%

For individual employers in the SLGRP, these rates are adjusted to reflect the individual employer's normal cost rate, pre-SLGRP pooled liability rate, transition liability rate, and side account rate offsets.

Executive Summary

Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

Pension

In June 2012 the GASB issued Statement No. 68, which replaced GASB 27 and governs employer financial reporting for fiscal years beginning after June 15, 2014. The new standard replaced many of the key elements of the prior reporting requirements. Under the new rules, employers are required to record a balance sheet liability for their unfunded pension obligations. In addition, the timing and coordination of plan and employer reporting has changed under the new requirements. GASB 68 information for employers will be provided separately by PERS and is not included in this report.

Executive Summary

Accounting Information (continued)

Retiree Healthcare

The Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA) are cost-sharing pools under GASB 45. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2017 through June 30, 2019 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

Contractually Required Contribution Rate

	Payroll		
	Tier 1/Tier 2	OPSRP	
		General Service	Police & Fire
RHIA July 1, 2015 to June 30, 2017	0.53%	0.45%	0.45%
RHIPA July 1, 2015 to June 30, 2017	0.00%	0.00%	0.00%
RHIA July 1, 2017 to June 30, 2019	0.50%	0.43%	0.43%
RHIPA July 1, 2017 to June 30, 2019	0.00%	0.00%	0.00%

In June 2015, the GASB issued Statement 75, which will replace GASB 45 and govern employer financial reporting for retiree healthcare obligations for fiscal years beginning after June 15, 2017. In general, the changes required by GASB 75 parallel those that occurred for pension reporting when GASB 68 replaced GASB 27. Accounting information for reporting under GASB 75 will be provided separately and is not included in this report.

Executive Summary

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide actuarial valuation report.

City of Yoncalla

	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Allocated pooled SLGRP T1/T2 UAL	\$333,507	\$241,585
Allocated pre-SLGRP pooled liability/(surplus)	(28,626)	(26,775)
Transition liability/(surplus)	(6,463)	(6,634)
Allocated pooled OPSRP UAL	24,756	17,104
Side account	0	0
Net unfunded pension actuarial accrued liability	323,174	225,280
Combined valuation payroll	174,138	149,616
Net pension UAL as a percentage of payroll	186%	151%
Pre-SLGRP pooled rate	(1.73%)	(1.77%)
Transition rate	(0.39%)	(0.44%)
Side account rate relief	0.00%	0.00%
Allocated pooled RHIA UAL	\$846	\$1,189
Allocated pooled RHIPA UAL	\$0	\$0

In the above exhibit, UAL amounts for the various pools (SLGRP Tier 1/Tier 2 Pension, OPSRP, RHIA, and RHIPA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool. This allocation differs from the proportionate share of Net Pension Liability (NPL) that will be allocated to employers under GASB 68.

Executive Summary

Principal Valuation Results (continued)

SLGRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
Normal cost	\$424.9	\$454.0
Tier 1/Tier 2 valuation payroll	2,691.8	2,827.9
Normal cost rate	15.78%	16.05%
Actuarial accrued liability	\$38,396.8	\$37,169.9
Actuarial asset value	27,682.7	28,465.3
Unfunded actuarial accrued liability	10,714.1	8,704.6
Funded status	72%	77%
Combined valuation payroll	\$5,594.3	\$5,390.8
UAL as a percentage of payroll	192%	161%
UAL rate ¹	6.03%	5.76%
State and Community College Pre-SLGRP Pooled Liability	\$539.5	\$561.1
LGRP Pooled Liability	(229.0)	(237.2)
Total Transition Liability	(748.8)	(762.2)
Tier 1/Tier 2 Active Members		
▪ Count	36,608	39,812
▪ Average Age	52.8	52.4
▪ Average Service	19.3	18.6
▪ Average Valuation Payroll	\$73,529	\$71,032
Tier 1/Tier 2 Dormant Members		
▪ Count	19,558	20,596
▪ Average Age	55.3	54.8
▪ Average Monthly Benefit	\$1,309	\$1,347
Tier 1/Tier 2 Retirees and Beneficiaries		
▪ Count	80,040	77,031
▪ Average Age	70.7	70.5
▪ Average Monthly Benefit	\$2,109	\$2,049

¹ The December 31, 2015 UAL rate shown for the SLGRP includes 0.15% for Multnomah Fire District #10 (0.15% at December 31, 2014). The City of Portland pays an additional 1.12% and the cities of Fairview, Gresham, Troutdale, and Wood Village pay an additional 0.15% (1.17% and 0.15% respectively at December 31, 2014).

Executive Summary

Principal Valuation Results (continued)

OPSRP

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
General service normal cost	\$342.2	\$301.3
OPSRP general service valuation payroll	4,266.9	3,720.4
General service normal cost rate	8.02%	8.10%
Police and fire normal cost	\$69.9	\$59.6
OPSRP police and fire valuation payroll	546.4	462.3
Police and fire normal cost rate	12.79%	12.90%
Actuarial accrued liability	\$3,742.5	\$3,064.1
Actuarial asset value	2,389.1	2,024.6
Unfunded actuarial accrued liability	1,353.5	1,039.5
Funded status	64%	66%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	14%	11%
UAL rate	1.27%	1.01%

Executive Summary

Principal Valuation Results (continued)

Retiree Healthcare

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIA		
Normal cost	\$3.3	\$3.5
Tier 1 / Tier 2 valuation payroll	4,730.8	4,933.1
Normal cost rate	0.07%	0.07%
Actuarial accrued liability	\$465.6	\$468.4
Actuarial asset value	419.3	395.9
Unfunded actuarial accrued liability	46.3	72.5
Funded status	90%	85%
Combined valuation payroll	\$9,544.1	\$9,115.8
UAL as a percentage of payroll	0%	1%
UAL rate	0.43%	0.43%

(\$ in millions)	Actuarial Valuation as of	
	December 31, 2015	December 31, 2014
RHIPA		
Normal cost	\$1.5	\$1.6
Tier 1 / Tier 2 valuation payroll	1,339.4	1,406.3
Normal cost rate	0.11%	0.11%
Actuarial accrued liability	\$67.8	\$70.5
Actuarial asset value	11.2	7.2
Unfunded actuarial accrued liability	56.6	63.3
Funded status	16%	10%
Combined valuation payroll	\$2,831.8	\$2,718.9
UAL as a percentage of payroll	2%	2%
UAL rate	0.38%	0.39%

RHIPA liabilities are allocated to State Agencies and the State Judiciary, the only employers participating in the RHIPa program.

Weighted Average Tier 1/Tier 2 Normal Cost

Pension

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund the benefits.

Members of the State and Local Government Rate Pool pay a payroll-weighted average normal cost rate using the normal cost rates developed for the pool for each tier and member classification. The table below shows the calculation of the individual employer's Tier 1/Tier 2 normal cost rate by member classification and in aggregate. The employer can elect to pay the member classification rates or the aggregate rate. For purposes of this calculation, all Community Colleges are treated as a single employer.

Development of Employer's Weighted Average Tier 1/Tier 2 Normal Cost Rate

	December 31, 2015			December 31, 2014		
	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost	SLGRP Normal Cost Rate	Employer Tier 1/Tier 2 Valuation Payroll	Normal Cost
Tier 1 General Service	17.55%	\$0	\$0	17.89%	\$0	\$0
Tier 2 General Service	12.26%	82,621	10,129	12.44%	74,427	9,259
Total General Service		82,621	10,129		74,427	9,259
Tier 1 Police & Fire	21.37%	0	0	21.53%	0	0
Tier 2 Police & Fire	18.95%	0	0	19.00%	0	0
Total Police & Fire		0	0		0	0
Total		\$82,621	\$10,129		\$74,427	\$9,259
Employer normal cost rate						
General Service			12.26%			12.44%
Police & Fire			19.94%			20.08%
Aggregate (Default)			12.26%			12.44%

An SLGRP employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of the SLGRP as calculated in the system-wide actuarial valuation report.

Transition Liability Information

Outstanding Balance of Transition Liability/(Surplus)

Upon joining the SLGRP, a transition liability or surplus was calculated to ensure that each employer entered the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the transition liability or surplus from the last valuation to the current valuation.

	Transition Liability
1. Transition liability/(surplus) as of December 31, 2014	(\$6,634)
2. January 1, 2015 through June 30, 2015	
A. Transition liability/(surplus) rate ¹	(0.37%)
B. Actual employer payroll	81,980
C. Payment to transition liability/(surplus)	(303)
3. July 1, 2015 through December 31, 2015	
A. Transition liability/(surplus) rate ¹	(0.38%)
B. Actual employer payroll	84,002
C. Payment to transition liability/(surplus)	(319)
4. Supplemental payment to transition liability	0
5. Interest	(451)
6. Adjustment due to merged, spun-off, or allocated employers	0
7. Transition liability/(surplus) as of December 31, 2015	
(1. - 2C. - 3C. - 4. + 5. + 6.)	(\$6,463)

¹ Transition liability or surplus rates shown are those paid on Tier 1/Tier 2 payroll for the indicated periods. For some surplus employers, this rate may differ from the rate paid on OPSRP general service or OPSRP police and fire payroll. In those cases, the payment to transition (surplus) shown below is the payment reflecting the rates on different payroll.

Development of Transition Liability or Surplus Rate

The rate adjustment attributable to a transition liability or surplus is determined by amortizing the liability or surplus on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool.

	December 31, 2015	December 31, 2014
1. Total transition liability/(surplus)	(6,463)	(6,634)
2. Combined valuation payroll	174,138	149,616
3. Regular amortization factor	9.504	10.118
4. Total transition liability/(surplus) rate	(0.39%)	(0.44%)

Side Account Information

Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

	New	Continuing	Total
1. Side account as of December 31, 2014	N/A		
2. Deposits during 2015		N/A	
3. Administrative expenses			
4. Amount transferred to employer reserves during 2015			
5. Side account earnings during 2015			
6. Side account as of December 31, 2015 (1. + 2. + 3. + 4. + 5.)			

Side Account Information

Side Account Balances

	December 31, 2015	December 31, 2014
Side Account 1	0	0
Side Account 2	0	0
Side Account 3	0	0
Total	\$0	\$0

Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

	December 31, 2015	December 31, 2014
1. Total side account	\$0	\$0
2. Combined valuation payroll	174,138	149,616
3. Average amortization factor	9.504	10.118
4. Total side account rate $(-1. \div 2. \div 3.)^1$	0.00%	0.00%

¹ For employers with more than one side account, the total side account rate is determined by calculating the rate on each side account separately and adding the rates together.

Brief Summary of Actuarial Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2015 valuation can be found in the system-wide actuarial valuation report.

Actuarial Methods and Valuation Procedures

A brief summary of the methods used in this valuation is shown below:

<i>Actuarial cost method</i>	Entry Age Normal.
<i>Amortization Method</i>	The UAL is amortized as a level percentage of combined payroll. The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period. The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period. All existing Tier 1/Tier 2 UAL was re-amortized over a 20 year period as of the December 31, 2013 rate-setting valuation. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of projected combined valuation payroll over a closed 20 year period.
<i>Asset valuation method</i>	Market value of assets, excluding reserves.
<i>Contribution rate stabilization method (rate collar)</i>	Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate generally will not increase or decrease from the prior contribution rate by more than the greater of 3 percent of payroll or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funding percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

<i>Net investment return</i>	7.50% compounded annually on system assets.
<i>Interest crediting</i>	7.50% compounded annually on members' regular account balances. 7.50% compounded annually on members' variable account balances.
<i>Consumer price inflation</i>	2.50% per year.
<i>Future general wage inflation</i>	3.50% per year.
<i>Healthcare cost inflation</i>	Ranging from 6.3% in 2016 to 4.4% in 2094.
<i>Administrative Expenses</i>	\$5.5 million added to OPSRP normal cost. \$33.0 million added to Tier 1/Tier 2 normal cost.

Brief Summary of Actuarial Methods and Assumptions

Changes Since Last Valuation

The key changes since the December 31, 2014 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

Changes in Actuarial Methods and Allocation Procedures

There were no changes in actuarial methods and allocation procedures since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

Changes in Assumptions

There were no changes in assumptions since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

Brief Summary of Changes in Plan Provisions

There were no changes in plan provisions occurred since the December 31, 2014 actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide actuarial valuation report.

Glossary

Actuarial Accrued Liability

The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value

The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method

Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Combined Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

Cost Sharing Multiple-Employer Plan

A single plan used to provide pensions to the employees of more than one employer wherein pension obligations are pooled and plan assets can be used to pay the benefits of the employees of any employer that provides pension through the plan.

Employer Contribution Rate

Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

Funded Status

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Normal Cost

The annual cost allocated to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

OPSRP Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Glossary

Pre-SLGRP Liability

The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

Pre-SLGRP Pooled Liability

The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

Present Value

Sometimes called “actuarial present value,” the estimated cost (as of the valuation date) of a series of future payments. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Rate Collar

A methodology that defines the maximum permissible period-to-period change in the base employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

Required Supplementary Information (RSI)

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27)

The accounting standard governing a state or local governmental employer’s accounting for pensions prior to GASB 68.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions.

Statement No. 68 of the Governmental Accounting Standards Board (GASB 68)

The accounting standard governing a state or local governmental employer’s accounting for pensions for fiscal years beginning after June 15, 2014.

Statement No. 75 of the Governmental Accounting Standards Board (GASB 75)

The accounting standard governing a state or local governmental employer’s accounting for post-employment benefits other than pensions for fiscal years beginning after June 15, 2017.

Tier 1/Tier 2 Valuation Payroll

Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the Tier 1/Tier 2 normal cost rate.

Transition Liability

The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

Unfunded Accrued Liability (UAL)

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial pre-collar UAL rate. The final UAL rate can be adjusted by the rate collar.



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